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CONTEXTUAL DETERMINANTS OF LINGUISTIC EXPRESSIONS: POINT OF VIEW AND GIVEN-NEW CONSTRAINTS IN ENGLISH.

by

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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled CONTEXTUAL DETERMINANTS OF LINGUISTIC EXPRESSIONS: POINT OF VIEW AND GIVEN-NEW CONSTRAINTS IN ENGLISH submitted by NOBUYA ITAGAKI in partial fulfilment of the requirements for the degree of MASTER OF SCIENCE in PSYCHOLINGUISTICS.

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Date ...... March 10, ... 1982.

This thesis is dedicated to my fellow students
who attended a seminar led by Dr. Yutaka SAYEKI,
Tokyo University of Science.

ABSTRACT

The present study investigated the effects that the discourse factors of point of view and given-new information structure cause on subjects' selections of alternative linguistic expressions. The study focused on two types of linguistic variation: propositional and syntactic. Propositional variation refers to the cases such as *John wrote to Mary* vs. *Mary heard from John*, both of which refer to the same event in a story. The surface variation of three syntactic types was examined: 1) the surface order of the two NP's of a symmetric predicate; 2) the surface order of the agentive and the patient NP of a voice structure; and 3) the surface position of a dative object NP.

Three experiments were carried out. In Experiment 1, the subjects first listened to two short stories and were then asked to rephrase the stories from the point of view of of one particular character. In Experiments 2 and 3, the subjects were first asked to read short stories whose last sentences were deleted. They were then asked either to choose one member from two alternative surface structures of the final sentences or to make intuitive judgements of the fitness of four altenative surface structures of the final sentences. Two types of short stories were used in the Experiments 2 and 3: a "motivated version," in which the "point of view" of each paragraph was

experimentally specified, and an "unmotivated version," in which the "point of view" was ambiguous.

The results of a propositional and a surface subject/object analysis of the rephrased stories showed that the character in a story whose point of view was established as a part of the discourse context was significantly more likely to be referred to as an agent or/and experiencer of the propositional content of a sentence and was also likely to be realized as a surface sentential subject. It was concluded that the contextual factor of point of view was a major indication of whose perspective a narrator or a speaker has to adopt in choosing from among alternative actions or states in planning the propositional content of a sentence.

In Experiments 2 and 3, it was shown that the surface subjects of the passive voice clearly reflected the contextual factors of both point of view and given-new information, while the surface subjects of the symmetric predicates and the leftmost positions of the dative object NP's reflected only the contextual factor of given-new information. That is, if NP's are the targets of the point of view and/or the given information, they are more likely to be placed in earlier sentential positions. In particular, the surface subjects of the passive voice are much more context-governed than the surface subjects of the

symmetric predicates and the leftmost positions of the dative objects.

Furthermore, the subject selection in the passive voice and the symmetric predicate was positively correlated with the humanness hierarchy of the NP's, while the leftward movements of the dative NP's were not. In particular, human NP's were shown to be significantly more likely to be the surface subjects of the passive voice and the symmetric predicates, regardless of their status with regard to the contextual factor of point of view and given-new information. It was suggested that this distinction between the voice structure and the symmetric predicate on the one hand and the dative sturcture on the other should be attributed to a psycholinguistic difference between a syntactic subject and a syntactic object. That is, a surface subject functions to reflect a narrator's or a speaker's egocentric bias towards human or human-related object or thing NP's and against non-human NP's.

It was concluded that, once a particular point of view and a given-new information structure are established as discourse context, they play a crucial role in a narrator's planning of the propositional content and surface structure of a sentence, indicating whose action or mental state has to be expressed in the on-going discourse and the leftward movements of contextually salient NP's. It is on the basis

of these contextual effects on the linguistic expressions that a narrator or a speaker can be a cooperative participant in the on-going discourse, by making his sentences more relevant to the discourse context.

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1. INTRODUCTION

A story is, by definition, composed of a plot and a storyteller. The plot may be simply defined as a schematically organized set of events; the storyteller, in general called "narrator," may be a person (e.g., author himself, main or minor character, etc.) who is in charge of revealing the plot to the readers.

An important aspect of the narrator is that he is given some special privilege by which he can relate a sequence of *the same events* or *happenings* in the story to his readers from several different *points of view* or *perspectives*, for example, character A's, character B's, or the narrator's own. Put in another way, the narrator can identify himself with one particular character as a target of the point of view.

Futhermore, it is conventional for the narrator to establish and maintain a consistent point of view of one particular character as *a part of discourse context* in a whole story or at least in each portion of the story (Booth, 1961; Black, Turner, & Bower, 1979; Scholes & Kellogg, 1966; Winograd, 1977).

As an example, suppose that there are two characters, *Mary* and *Tom*, in a story and that the narrator is relating the story from *Mary's* point of view. According to Kuroda (1973, 1977), it could be argued that epistemological interpretations of the following two sentences: *Mary is sad* and *Tom is sad* should be clearly distinguished. The former expresses the mental state of *Mary*, to whom the narrator has the so-called "omniscient access," and can, therefore, be viewed as indicating true facts without any suggestion of doubt. On the other hand, the latter refers to the mental state of *Tom* to whom the narrator does not have any access and thus it is not certain whether or not it is fact that *Tom* really feels sad. The point is that, by *Tom is sad*, the narrator tries to express *Mary's* subjective judgement of *Tom's* mental state, namely, *It seems to Mary that Tom is sad*, since the narrator is presenting the story from *Mary's* point of view. It is also expected that experienced readers can handle this rather complicated manoeuver.

Kuroda (1973) also claimed that in Japanese, this epistemological difference in meanings of sensation or emotional adjectives is linguistically significant. This means that, given *Mary's* point of view as discourse context, the Japanese equivalent *Tom wa kanasii* (*"Tom is sad"*) is less acceptable. Kuroda then suggested that, in this case, the predicate of *Tom* should not be the sensation adjective *kanasii* but instead a sensation verb *kanasigaru*, which refers to *Tom's* attitudes or behavior such that the speaker could infer that *Tom* is sad. Therefore, the Japanese equivalents of *Mary is sad* and *Tom is sad* have to be *Mary wa* *kanasii* and *Tom wa kanasigateiru*.

From these considerations, it may be argued that the literary and traditional notion of point of view must be taken into account as a crucial part of psychological models both of sentence production and of sentence comprehension. Hereafter, what is meant by "sentence production" is the planning of the propositional contents and surface structures of sentences, while "sentence comprehension" refers to a conceptual level of sentence understanding processes.

The major effort of the present study is focused on the *contextual effects* of point of view on the so-called "stylistic choices" among alternative sentences, namely, how one chooses among the alternative linguistic expressions of the same event, given a specific point of view as discourse context. In the present study, this is discussed in terms of the following two major aspects of sentence production:

1. the planning of a propositional content of a sentence;
2. the planning of a surface structure of a sentence, namely, syntactically structured array of lexical items.

First, it must be pointed out that the present study focuses on two kinds of the stylistic variation of linguistic expressions. The first is of a propositional level (Teleman, 1975). For example, as far as the plot of a story is concerned, (1 a,b) and (2 a,b) below can be claimed to refer to the same event concerning *Mary* and *Tom*. However each has a different propositional content, namely, different case structures of the NP's and the predicates:

1) a. Mary decided to send a letter to Tom.
   b. Tom received a letter from Mary.
2) a. Tom agreed to sell a car to Mary.
   b. Mary bought a car from Tom.

It can readily be seen that, in (1a) and (2a), *Mary* and *Tom* are referred to as the *experiencers* of psychological processes of decision and agreement, respectively, and as the *agents* of actions of sending a letter and selling a car, respectively. On the other hand, in (1b) and (2b), *Tom* and *Mary* are referred to as the *agents* of action-process predicates of receiving a letter and buying a car, respectively (Chafe, 1970; Fillmore, 1968).

The problem to be clarified here is what kinds of linguistic and/or nonlinguistic factors govern the narrator's choices from among the alternative propositional contents of sentences which seem to refer to the same event or happening in the story. One possible explanation is that, once the point of view of one particular character (e.g., *Mary* or *Tom*) is established as the discourse context, the narrator or the speaker is expected to relate or describe a sequence of events from a consistent point of view of that character. For example, given *Mary's* point of view, it is more likely that the narrator describes the above two events as *Mary's* actions or mental states, namely, *Mary decided to send a letter to Tom* and *Mary bought a car from Tom* rather than *Tom received a letter from Mary* and *Tom agreed to sell a car to Mary*, respectively.

Therefore, in the present study, the following hypothesis is proposed and tested empirically: if it is the case that the narrator relates the plot or each event from a consistent point of view of one particular character, he tends to refer to that character as the agent of actions or as the experiencer of mental states or sensory activities in planning the propositional contents of sentences, realizing these agents or experiencers as the surface subjects in planning the surface structures of sentences. In the present study, this hypothesis is called the "Primary Effect Hypothesis."

The second type of stylistic variation deals with the syntactic variation of the surface structures of sentences (Andersson, 1975; Jacobs & Rosenbaum, 1971). The present study focuses on the following three kinds of the alternative surface structures: 1) the surface orders of two NP's of so-called "symmetric predicates" or "equative predicates"; 2) the surface orders of agentive and patient NP's of passive and active sentences; and 3) the surface orders of direct and dative object NP's of two-object predicates. These are exemplified by the following pairs of sentences:

3) a. Mary conferred with Tom about a car.
   b. Tom conferred with Mary about a car.
4) a. Mary was hit by Tom.
   b. Tom hit Mary.
5) a. Tom bought Mary some flowers.
   b. Tom bought some flowers for Mary.

While the propositional contents, i.e., case structures, of the two members of each pair are exactly the same, the surface orders of the two NP's are reversed in each pair. Hereafter these three syntactic types are referred to as the "symmetric predicate," "voice structure," and "dative structure" for the sake of convenience.

The problem to be addressed here is what kind of discourse context determines the surface structures in question. Traditionally, a number of linguists and psycholinguists have attempted to account for this problem in terms of rather purely linguistic notions such as "subject vs. predicate," "given vs. new," "focus vs. presupposition," etc. (see e.g., Li, 1976). However, according to Kuno (1976), Kuno and Kaburaki (1977) and Ransom (1977), the stylistic choices between the alternative surface structures of (3a,b)-(5a,b) could be explained in terms of a narrator's or a speaker's *empathy focus* on one particular participant in the event to be described. (It must be noticed that these authors used the term "empathy" instead of the term "point of view," although there is no significant difference between the two.)

Kuno and Kaburaki (1977) indeed proposed the following, which they called the "Surface Structure Empathy Hierarchy":

> It is easiest for the speaker to empathize with the referent of the subject; it is next easiest for him to empathize with the referent of the object; ... it is next to impossible for the speaker to empathize with the referent of the *by* - passive agentive: Subject $\geq$ Object $\geq$ ... $\geq$ *By*-passive Agentive. (P. 648)

It should be pointed out that, concerning dative positions, Kuno (1976) and Kuno and Kaburaki (1977) did not make any specific prediction, although Ransom (1977) proposed to account for humanness and definiteness constraints on dative positions in terms of a speaker's empathy focus. Accoding to Lakoff and Peters (1969), the underlying structure of (3 a,b) is *Tom and Mary conferred about a car*. The subject NP's and the objects NP's of the preposition of (3 a,b) are derived from the phrasal conjunction of the two NP's of the symmetric predicate in a transformational manner.

From this, it follows that point of view is crucial in the planning of the surface structures of sentences as well as in the planning of the propositional contents of sentences. Therefore, the second hypothesis of the present study is that the NP's denoting the referents from whose point of view a narrator is relating the story tend to be placed in earlier syntactic positions in the surface structures of sentences. In the present study, this hypothesis is called the "Secondary Effect Hypothesis." Hereafter, the NP which refers to the target character or referent of the contextual factor of point of view is referred to as "target NP."

It may be argued that the leftward movements in question are viewed as linguistic marking devices of the contextual factor of point of view, the function of which is to place the target NP's in the leftmost positions of sentences. Furthermore, these syntactic marking devices can be claimed to compensate the Primary Effect Hypothesis. This is because the Primary Effect Hypothesis can not answer the following questions raised in (3-5 a,b):

1. Which of the two agent NP's is more likely to be the surface subject of the sentence with the symmetric main verb?
2. Why is the patient NP realized as the surface subject of the passive voice, with the agent NP in the final position of the sentence?
3. What determines the speaker's choice of the two alternative surface positions of the dative or beneficiary NP: immediately after the main verb and the final position of the sentence?

These can not be answered in terms of the Primary Effect Hypothesis, but instead in terms of the Secondary Effect Hypothesis. Therefore, the syntactic marking devices are claimed to be for the contextual factor of point of view which is beyond the Primary Effect Hypothesis. It is in this sense that the second hypothesis of the present study is called the "Secondary."

In a sense, the contextual effects exemplified in (3 a,b)-(5 a,b) may be claimed to be discourse functions of the so-called "optional transformation rules," namely, the correlation between the discourse context and the alternative surface structures of sentences. In this connection, Jacobs and Rosenbaum (1971) briefly summarized the generative linguistic approach to stylistics as follow:

> So, although transformations preserve the basic meaning of a sentence structure, the choice of one transformational route rather than another can have important stylistic consequences. (p. 37) ... the choice made between alternative transformations results in the additional dimension of meaning that we have called surface meaning. Style is the result of linguistic choice and surface meaning is the result of style. (pp. 38-39)

Needless to say, it is the difference in the surface meanings that is meant by the contextual effects of point of view on the stylistic choices among the alternative linguistic expressions of the same events or happenings in a story.

An important aspect of the discourse notion of point of view is the fact that human characters can be much easier targets of the point of view than animal or thing characters. In other words, a narrator has some difficulty in identifying himself with nonhuman characters in the story. This can be taken to imply that there are significant interactions between the humanness of the referents of the target NP's and their tendency to be moved into the leftmost positions within the surface structures of sentences. For example, even though some animal or thing characters, e.g., *the Wind, the Sun,* etc. in fables, are humanized as the targets of the point of view, they are less likely to appear in the earlier positions of the surface structures of sentences.

A similar kind of interaction can also be found between the tendency for target NP's to be moved into the leftmost sentential positions and the humanness and animacy of the NP's which are to be moved into the rightmost sentential positions. That is to say, if the latter NP's are higher in the humanness hierarchy than the former, i.e., target NP's, the tendency for the former NP's to be moved into the leftmost positions may be less strong. For the sake of convenience, the latter NP's are hereafter referred to as "anti-target NP's." For instance, the anti-target NP's of (3-5 a,b) are indeed *Tom, Tom,* and *Some flowers,* respectively.

The third hypothesis of the present study is therefore that there are significant interactions between the humanness of the referents of target and anti-target NP's and a narrator's use of the marking devices of point of view, namely, the Secondary Effect Hypothesis mentioned above. In the present study, this third hypothesis is called the "Humanness Interaction Effect Hypothesis."

In connection with this point, Kuno and Kaburaki (1977) and Ransom (1977) made quite similar proposals. For example, concerning passive and dative positions, Ransom proposed the following, which she called the

"Humanness-Animacy Constraint":

> If an advanced NP is lower on the Humanness-Animacy Hierarchy than the NP it replaces, the sentence will be less acceptable. (p. 423)

It should be noted that Ransom presupposed the following Humanness-Animacy Hierarchy: Human-Animate NP's > Nonhuman-Animate NP's > Nonhuman-Nonanimate NP's.

Moreover, there is another type of interaction phenomena between the marking devices of point of view and the so-called "Given-New Strategy." It has been shown in several psycholinguistic experiments that given NP's tend to precede new NP's in the surface structures of sentences (Bock, 1977; Bock & Irwin, 1979; Smyth, Prideaux, & Hogan, 1979; Tannenbaum & Williams, 1968). From this, it may be hypothesized that, if NP's are assigned the contextual status of given information as well as of the target of the point of view and anti-target NP's are new information, they are more likely to be moved to the leftmost of the alternative sentential positions in an additive fashion. In the present study, this hypothesis is called the "Positive Additive Effect Hypothesis."

It seems reasonable to assume that given information is indeed much more likely to be the target of the contextual factor of point of view than new information. In this connection, Kuno and Kaburaki (1977) proposed the following, which they called the "Topic Empathy Hierarchy":

> It is easier for the speaker to empathize with an object (e.g. person) that he has been talking about than with an object that he has just introduced

> into the discourse for the first time. Discourse-Topic > Discourse-Nonanaphoric. (p. 654)

Ransom (1977) also discussed passive voice and dative positions in terms of the definiteness and specificity of the NP's to be moved. It is, therefore, of considerable importance to see whether the contextual effects of point of view and the contextual effects of a given-new information structure on the sentential positions of the target and given NP's are simply additive or interactive.

The contextual effects of point of view on the stylistic choices among the alternative linguistic expressions of the same events have been discussed so far in terms of the planning of both the propositional contents and the surface structures of sentences. In summary, concerning those contextual effects, the following four hypotheses have been proposed and are to be tested empirically:

Primary effect hypothesis. The character who is established in discourse as the target of the contextual factor of point of view tends to be referred to as either the agent of an action or the experiencer of a psychological state in the planning of the propositional content of a sentence and then to be realized as the surface subject of the sentence.

Secondary effect hypothesis. Given alternative positions within the surface structure of a sentence, the NP which refers to the target character of the contextual factor of point of view tends to be moved into the leftmost of the alternative positions in the planning of the surface structure of the sentence.

Humanness interaction effect hypothesis. If a narrator has more difficulty in identifying himself with animal or thing characters than human characters as the target of the contextual factor of point of view, the target NP which refers to the animal or thing character is less likely to be moved into the leftmost position than the target NP which refers to the human character. Furthermore, if an anti-target NP is higher in the humanness hierarchy than the target NP, such a positional tendency of the target NP is less strong.

Positive additive effect hypothesis. If the NP which refers to the target character of the point of view is also assigned the contextual status of given information, the tendency for the target NP to be moved into the leftmost position is facilitated by another tendency for the given NP to be moved into the leftmost position.

The purpose of the present study is to test these four psycholinguistic hypotheses about the planning of the propositional contents and the surface structures of sentences in an empirical manner, namely, in terms of subjects' sentence production under experimentally manipulated situations. For this purpose, in the present study, three different but related experiments were designed and conducted.

2. REVIEWS OF RELATED STUDIES

2.1 Preliminary Remarks

In order to clarify the basic ideas of the present study, it is necessary to review several related studies in both the linguistic and the psycholinguistic literature. In this regard, the following questions are of central importance:

1. What kind of psychological considerations of discourse context have been proposed to account for the contextual effects on sentence production?
2. What is a propositional content of a sentence?
3. How is the propositional content of a sentence built up as the speaker's intended message?
4. What principles have been proposed to account for the contextual effects on the choice among the alternative surface structures of sentences?

In what follows, each of these questions will be discussed along with the reviews of related studies.

2.2 Psychological Considerations of Discourse Context

It is first necessary to establish that it is psychological considerations of discourse context and not purely linguistic considerations that are of considerable importance for the present study. As pointed out earlier, discourse context has traditionally been described in terms of purely linguistic notions such as "subject vs. predicate," "given vs. new," "focus vs. presupposition," and so on, while, the psychological aspects of these notions have not drawn much attention from many linguists. However, it goes without saying that, without their psychological implications, these notions can not account for the basically psychological phenomena in sentence production which are the main focus of the present study (Chafe, 1976; Clark & Clark, 1977; Schlesinger, 1977).

In the present study, it is assumed that the psychological considerations of discourse context consist of a narrator's assessment of his addressees' understanding as well as his own understanding of the on-going discourse context. In a theoretical sense, the importance of the assessment of the addressees' temporary states of mind may be traced back to the so-called "cooperative principle" between a speaker and the addresee which was originally proposed in Grice (1967, 1975). Grice (1975, pp. 45-46) characterized the cooperative principle by the following four conversation conventions: "Quantity," "Quality," "Relation," and "Manner:"

Quantity. Make your contribution as informative as is required (for the current purpose of the exchange). Do not make your contribution more informative than is required.

Quality. Do not say what you believe to be false. Do not say that for which you lack adequate evidence.

Relation. Make your contribution relevant to the aims of the on-going conversation.

Manner. Make your contribution brief and orderly. Avoid obscurity and ambibuity of expression.

The point is that a basic function of the psychological considerations of discourse context can be viewed as an essential part of the cooperative principle. Put another way, it is on the basis of a speaker's assessment of the addressee's understanding of the on-going discourse that the speaker can be a cooperative participant in the conversation and can also find the best linguistic expressions for his intended messages.

Schlesinger (1977) referred to the psychological considerations of discourse context as "communicative considerations," asserting that:

> The decision to use one relation rule or intonation rule rather than another, or one lexicalization rather than another, is made on the basis of various COMMUNICATIVE CONSIDERATIONS (of which the speaker may or may not be aware). We propose therefore an additional component for the production model, which together with the I-marker component determines the form of the utterance. (p. 65)

From this, it is clear that a speaker's psychological considerations of discourse context, possibly including pragmatic considerations, must be playing a crucial role in planning the propositional contents and the surface structures of sentences.

Clark and Clark (1977) and Halliday (1970, 1973) argued that a speaker's psychological considerations of discourse context had to be reflected in the so-called "thematic structure or thematic organization" of a sentence. Clark and Clark, in fact, characterized the psychological considerations of discourse context in terms of the following three elements: 1) the given-new information structure – what an addressee already knew and what he did not know yet; 2) the subject-predicate distinction – what a speaker and the addressee want to talk about; and 3) the frame-insert distinction – what has to be the point of departure (i.e., some particular area of the addressee's knowledge).

Halliday (1970) used the term "theme-rheme distinction" for the third element, the frame-insert distinction, characterizing the theme by "here is the heading to what I am saying" (p. 163). Halliday also claimed that the given-new information structure could be conceived of as being relevant to the psychological considerations of discourse context and the given information could be defined simply as being "derivable" information from the preceding discourse.

Van Dijk(1977 a, b; 1979) argued that when people are involved in comprehending or producing discourse, they must concentrate on the so-called "macro-structure" of the discourse as well as on single sentences. The macro-structure is basically the same kind of idea as a story grammar or a schematic plot of a story (Kintsch & van Dijk, 1978; Rumelhart, 1975, 1977; Schank & Abelson, 1977; Thorndyke, 1977).

As linguistic evidence for the presence of the macro-structure, van Dijk (1977b, 1979) pointed out that conjunctions and sentence adverbials such as *but, so, however, furthermore,* etc. functioned not only as the connection of single sentences, but also as the connections of the macro-structures of whole passages, namely, macro-propositions. In other words, a narrator may presuppose that his readers do not merely construct an unorganized list of single sentences of previous passages or paragraphs, but also somehow build a certain kind of macro-structure, i.e., integrated short summary, of the previous passages as the discourse context. For example, if a narrator starts a new passage or paragraph with *from Mary's point of view,* there is no doubt that he assumes that, as the discourse context, his readers understand that the preceding passages are related from the point of view of someone else, and not from *Mary's* point of view.

From this, the following points can be made: a) it is rather a conventional skill for a narrator to assume that his readers always concentrate on summarizing preceding discourse as well as on understanding each single sentence; b) a narrator takes into account his own assessment of these temporary summaries of the readers in the planning of sentences; and c) the notion of point of view is one major element of the macro-structure of discourse context.

As far as I know, Chafe is the first linguist to call for the psychological considerations of several discourse notions from a perspective of cognitive psychology. Chafe (1972, 1976) claimed that the propositional content of a sentence might be represented in terms of the semantic structure with a predicate and its case arguments and that each noun could be assigned contextual status as well as the syntactic case status. This may be taken to mean that a speaker's psychological considerations of discourse context may be assumed to consist of the contextual status of nouns or noun phrases.

As possible contextual roles of nouns, Chafe (1976) pointed out: "givenness," "contrastiveness," "definiteness," "subject," "topic," and "point of view." Each of these is worth a brief summary.

Givenness. According to Chafe (1976), what a speaker assumes to be in the addresee's consciousness in the planning of sentences is called "given information." On the other hand, what is introduced into the consciousness of the addressee for the first time by an utterance of the speaker is called "new information." (As implied earlier, it is interesting to note the difference between Chafe's notion and Halliday's notion of the given-new distinction.)

Contrastiveness. Chafe (1976) argues that, when a speaker produces a contrastive sentence, for example, *Rónald made the hamburgers*, he must have made at least the following three assumptions about his addressee's temporary state of mind: 1) the addressee is aware that someone made the hamburgers; 2)the addressee has a limited number of candidates in his mind as that someone; and 3) the assertion is necessary for the addressee which tells him that the someone is *Ronald*. It may, although not necessarily, be that the addressee's awareness, namely, *Someone made the hamburgers*, and the set of the candidates for that someone are assumed to be the given information.

Definiteness. Chafe's (1976) criterion for the definiteness of of a noun is whether or not an addressee can uniquely identify the referent of the noun either through his consciousness, i.e., as given information, or through his knowledge of the world. In the latter case, the speaker assumes the addressee to be able to identify the specific referent of the noun on the basis of the schematic knowledge of the world. An example from Chafe (1976) is helpful: after a speaker utters *We looked at a new house yesterday*, the speaker can treat the referent of *kitchen* as being definite in the next sentence, *The kitchen was extralarge*. This is because the speaker assumes that his addressee is able to identify easily which kitchen is being talked about on the grounds of the conventional knowledge that most houses have a kitchen.

This also implies that the speaker assumes that his addressee is able to understand a macro-level of implications of his utterance. However, it is not certain whether or not the speaker assumes that the *kitchen* is already in his addressee's consciousness (namely, as given information) by hearing *We looked at a new house*, but the speaker at least assumes that, at the knowledge level, his addressee will have little trouble in identifying which kitchen he means in the next sentence. From the speaker's point of view, givenness is necessarily definiteness, but definiteness does not necessarily imply givenness.

It is interesting to note a clear distinction with regard to givenness and definiteness between Chafe (1976) on the one hand and Halliday (1970) and Haviland and Clark (1974) on the other. The latter authors treated the notion of definiteness as a variant of givenness. For example, Haviland and Clark (1974) argued that given information could be divided into two types: "direct antecedent" and "indirect antecedent," the latter of which could be identified with resort to a so-called "inferential bridge." Thus, the referent of *the kitchen* in the above example is exactly the given information of the second type, i.e., an indirect antecedent. However, Chafe's (1976) distinction between givenness and definiteness can be claimed to be significant from the viewpoint of information processing psychology: the distinction between a short-term or working and a long-term memory. Put another way, givenness and definiteness have to do with the information processing of the short-term and the long-term memory level, respectively. According to Chafe (1976), the inferential bridge is obviously a cognitive process of the long-term memory level (i.e., human knowledge).

Subject. Chafe (1976) first assumed that human knowledge was composed of a large number of cognitive units which represent our knowledge of particular individuals or events and that a primary function of sentences was to add new knowledge about such particular individuals or events. For this purpose, a speaker has to plan sentences in such a way that the addressee can identify some particular individual or event in his knowledge as a starting point to which the new knowledge conveyed by the sentences can be assimilated. The subject may be defined as the starting point of the addressee's knowledge of the world.

In a sense, this notion of subject does not greatly differ from the rather traditional notion of subject, namely, that which is being talked about. The point is that Chafe (1976) attempted to define the notion of subject from a psychological point of view. That is to say, the notion of subject has to do with the acquisition process of new knowledge and the way human knowledge is organized.

It was also suggested that subject nouns need not always represent given information. This can be easily seen from the following example from Chafe (1976): suppose that two people hear a crash from the next room; one shouts to the other *What happened?*; and that the other's response is

The dog knocked over the lamp. The subject *the dog* is not the given information, but instead the new information in the sense of being introduced for the first time in the discourse context into the consciouness of the addressee; and the conceptual referent of *the dog* may be easily identified in the addressee's knowledge as the starting point, i.e., the dog of their next door neighbor, to which the new knowledge *knocked over the lamp* can be added. This is also why the referent of *the dog* is assigned the definite status in spite of the fact that it has not been referred to in the preceding discourse context. (It is, of course, possible that a non-definite referent, i.e., totally new information, can be a subject as the starting point in knowledge.)

Topic. Chafe (1976) claimed that, as far as English language was concerned, the so-called "topic" was a special case of contrastiveness in the sense that the focus of contrast was placed in a sentence initial position for some reason. Therefore, it seems that the psychological considerations of the contrastiveness discussed above can also be conceived of as being true for the notion of topic.

Point of view. According to Chafe (1976), the psychological basis of point of view lies in an epistemological fact that one can, to some extent, see the world through the eyes of others as well as through one's own eyes, or can identify oneself with others so as to see their inner as well as outer world. This can be interpreted to imply that, in verbalizing the on-going world, one may take the point of view of some particular participant in the world. One of the psychological considerations of discourse context may, therefore, be from whose point of view the discourse participants are talking about or describing their shared experience in the on-going world.

Based on what has been discussed so far, it can be claimed that the discourse notion of point of view is one of the essential psychological considerations of discourse context. Therefore, at this point, it is necessary to review the discourse notion of point of view from a historical point of view.

Traditionally, the notion of point of view has been discussed in the narrative literature rather than in the linguistic literature (Booth, 1961; Kuroda, 1973, 1977; Scholes and Kellogg, 1966). Booth (1961) described the literary notion of point of view as follows:

> One of the most obviously artificial devices of the storyteller is *the trick* of going beneath the surface of the action to obtain a reliable view of a character's mind and heart. Whatever our ideas may be about the natural way to tell a story, artifice is unmistakably present whenever the author tells us what no one in so-called real life could possibly know. In life we never know anyone but ourselves directly and authoritatively without being forced to rely on those shaky inferences about other men which we can not avoid in our lives. (p. 3)

Just as the reliable view of a character's mind and heart is an essential part of readers' joy in reading stories, so is it an essential part of narrators' linguistic skills or devices to make clear whose point of view they are taking, namely, whose thoughts, fellings, actions, and so on they are expressing.

As for the linguistic function of point of view, Grimes (1975) stated:

> It seems to be a special property of sentient participants that the amount of information the speaker is allowed to imput to each of them is limited according to rather strict rules. Just as we use linguistic identification to attach the names of different physical characteristics to people that we talk about, so that we build up a picture of a person named *Billy* who is five years old, blond headed, and cute, we use similar means to establish that he likes cotton candy, saw a parade go by last Saturday, and just had a fight with his sister. In other words, we use speech and inference to build up an image of a data base that we impute to him, in which his experiences are accessible to us, and his attitudes and feelings at each stage of our talking about him are open to inspection. The rules for proper management of the speaker's picture of what is inside the heads of the persons,real or fictitious, about whom he is talking, are collectively known as VIEWPOINT. (p. 319)

This can be taken to mean that the linguistic expressions of events in a story must be governed by whose physical and psychological image a narrator is trying to build up, since a basic literary function of language is to build up such images of characters in the story. More importantly, it is this purpose that the linguistic marking devices of point of view, discussed in Chapter 1, are assumed to serve.

One point has to be made here: Booth's (1961) literary notion of point of view can, in a sense, be considered to be restricted to the psychological descriptions or images of characters in a story, for example, thoughts and feelings.

However, it should be noted that the present use of point of view refers to not only such psychological aspects, but also physical aspects, namely, actions, action-processes, physical processes or states, etc. This means that the notion of point of view includes a narrator's idea or decision of whose actions or physical processes he has to describe in order to maintain a consistent point of view in the story. It might, therefore, be an alternative to use the term "a psychological bias towards one particular character and against others," instead of the term "from one particular character's point of view." However, it was decided that the present study should use the term *Point of View*, as long as it does not cause terminological trouble, except that the present use of point of view has to be seen as being wider than the traditional literary use of the expression. It is possible that Kuno (1976) and Kuno and Kaburaki (1977) employ this wider use of point of view, thereby motivating the term *Empathy* rather than *Point of View*.

According to Grimes (1975) and Perrine (1965), the following four are major types of point of view in the narrative literature:

Omniscient point of view. A narrator is in general the author. He considers himself to have complete access to the minds as well as the actions of all the characters in the story. Accordingly, the narrator can relate the story from the point of view of any character.

Third person subjective point of view. A narrator is usually the author. He tells the story both from his own point of view and from the point of view of one particular character, referred to as a third person pronoun. In other words, the omniscient power of the narrator is limited to this particular character only. Thus the narrator does not have any direct access to the minds of other charcters except that he can refer to the minds of those characters through a rather subjective evaluation by the chosen character.

First person participant point of view. A narrator is one character himself. He refers to himself as a first person and relates the story from his own point of view only. He can, of course, not refer directly to the minds of other characters, except that he is allowed to infer things about them.

Third person objective point of view. A narrator is in general either the author or the character. The narrator relates the story from a completely objective point of view. That is, he does not make any comment on, interprete, or enter the minds of the people in the story, but instead reports only what is seen and heard.

From these perspectives, it follows that one of the possible points of view may be established and maintained as a consistent discourse context at least in one portion of the story; furthermore, the language use of the narrator is subject to a consistent point of view, namely, the linguistic marking devices of point of view (Winograd, 1977).

It has been assumed so far that the point of view of discourse context has to do with one particular character in a story with whom the narrator identifies himself or towards whom the narrator has a psychological bias. However, it must be recognized that the notion of point of view has also been discussed in connection with a deictic property of discourse situation (Ertel, 1977; Fillmore, 1966; Lyons, 1968). Fillmore (1966) suggested that the meaning structures of such English deictic words as *here vs. there, this vs. that, come vs. go,* etc. could not be described adequately without resort to the deictic properties of discourse situation, namely, a spatial or visual point of view as well as characters' points of view.

Black, Turner, and Bower (1979) argued that the point of view of discourse context was composed of both a deictic and a character's point of view. In addition, Black, *et al.* found that it took the subjects a significantly shorter time to comprehend a compound sentence *Bill finished working in the yard and he went into the house* than its logical synonym *Bill finished working in the yard and came into the house.* The argument is as follows. The common first clause of both sentences establishes the narrator's point of view, namely, he identifies himself with *Bill*, and his spatial point of view is *in the yard*, but the use of *came* in the second sentence indicates the narrator's spatial point of view is *in the house*, not *in the yard*. Thus, two inconsistent spatial points of view arise and such inconsistency may cause the subjects to spend more time in comprehending the second sentence.

The present study focuses on the notion of the point of view which is defined by a narrator's identification with or bias towards one character, excluding the spatial point of view of discourse situation. But it can be claimed to be of theoretical importance to assume the point of view of discourse context to be composed of both a deictic and a character's point of view.

In summary, it can be concluded that as an essential part of the cooperative principle between a storyteller and his readers, the storyteller is expected to establish and maintain a consistent point of view as a part of the psychological constraints on discourse context; otherwise, the readers may have difficulty in understanding the story. It is also important to note that a storyteller does not only have to establish and maintain such a consistent point of view, but also must represent it unambiguously by means of several linguistic devices. It is an empirical issue what kinds of linguistic devices can be considered to be the marking devices of point of view. In the present study, the following were hypothesized as the marking devices: 1) two case arguments of a propositional level: agent and experiencer; 2) the surface subject variation of a symmetrical predicate; 3) the surface subject variation of a voice structure; and 4) the positional variation of a dative object (see Chapter 1).

2.3 Propositional Contents of Sentences

There is no question that a sentence has it own content and that a major function of language is to convey the content of the sentence to an addressee. Halliday (1970) stated:

> Language serves for the expression of 'content': that is, of the speaker's experience of the real world, including the inner world of his own consciousness. We may call this the *ideational* function, though it may be understood as easily in behavioural as in conceptual terms ... (p. 143)

A major question on which the present study focuses is how one builds such experience units relevant to linguistic expressions. In other words, how does one divide the whole experience of the inner or outer world into several smaller parts, each of which may then be built into the propositional content of each sentence? The present study assumes that the discourse notion of point of view plays a major role in partitioning the experience and then building the propositional content of each sentence.

It was assumed in much early psycholinguistic research that one began planning sentences with an initial symbol #S# of the so-called "kernel sentence" (Chomsky, 1957, 1965). The main effort of these studies was then focused on the psychological reality of the basic notions of generative transformational grammar such as phrase structure and transformational rules (e.g., Fodor, Bever, & Garrett, 1974; Slobin, 1971).

However, it has more recently been suggested that one starts planning and producing sentences with cognitive or prelinguistic antecedents which may lead to his intended message (Baker, 1976; Carroll, 1973; Osgood, 1971; Schlesinger, 1977). For example, Osgood (1971) stated:

> In any case, it is clear that any theory of language behavior (psycholinguistic performance model) must inquire into the antecedents of S and relate these antecedents to the forms and contents of particular sentences. Neither the syntactic bone nor the lexical flesh of sentences created by real speakers is independent of the non-linguistic contexts in which they occur. ... this non-linguistic cognitive system is 'where sentences come from' in sentence creating by speakers and 'where sentences (finally) go to' in sentence understanding by listeners. (pp. 498-499)

The important point is that the cognitive (or prelinguistic) meaning is the actual initiator of the planning of sentences, not merely the semantic interpretation of the initial symbol #S#.

It can also be argued that the cognitive or prelinguistic antecedents have to do with human thought. Accordingly, they are generally called "psychological meanings" and have been considered to be beyond the semantic structures of sentences. However, the present study assumes that, from the viewpoint of sentence production, there is no clear boundary between the psychological meaning and the linguistically relevant meaning (i.e., the semantic structure) of a sentence; both of them should be represented by the same terms and at the same level, except that the propositional content of a sentence or a speaker's intended message is further elaborated in the planning process of sentence production as being more relevant to linguistic expressions. For example, the propositional contents which refer to unnecessary information or are not to be verbalized are in general deleted, although they are surely part of the psychologically perceived meaning of an event.

Several psychological models have been proposed which attempt to represent such cognitive and prelinguistic contents of sentences (Anderson & Bower, 1973; Kintsch, 1974; Norman & Rumelhart, 1975). It is interesting to note that all of these models are based both on the so-called "meaning representation" of generative semantics (e.g., lexical decomposition) and the so-called "case structure" of Fillmore's (1968) case grammar. Their basic assumption is that the cognitive content of a sentence can be defined as a set of propositions each of which consists of one conceptual predicate plus its obligatory or optional case arguments.

Following these suggestions, the present study assumes that a proposition is a basic unit of human verbal thinking and knowledge representation (or semantic memory), with an intended message, as well as the cognitive content of a sentence, represented in terms of such propositions of psychological validity (Clark & Clark, 1977; Kintsch & Dijk, 1978; Schlesinger, 1977). It should be noted that, as mentioned above, the propositional contents of sentences are more directly relevant to their linguistic expressions than the cognitive and prelinguistic contents.

There seem to be two different psycholinguistic views of the propositional contents of sentences. One is that contextual and/or illocutionary information is a part of the propositional content of a sentence (Baker, 1976; Chafe, 1972; Carroll, 1973). The other is that these kinds of information have to be regarded as rather independent variables in planning and producing sentences. For example, Clark and Clark (1977) suggested that the propositional content, the illocutionary content, and the thematic content be assumed to serve different kinds of functions in planning sentences. Likewise, Schlesinger (1977) identified two basic components of sentence production: an intentional marker (denoted by "I-marker") for the content of a sentence and a communicative consideration for the illocutionary and thematic content of the sentence. Schlesinger described his motive for the functional distinction between the I-marker and the communicative consideration as follow:

> The distinction between two components which is proposed here is motivated by a difference in function between I-marker elements and relations on the one hand and communicative considerations on the other; the I-marker marshals sets of alternative realization rules and communicative considerations determine the choice between the alternatives. These two aspects of the messages thus play different roles in the production process and consequently they are assigned to different components in the model. (p. 66)

Although it is beyond the scope of the present study to determine whether or not the contextual factor is a part of the propositional content of a sentence, there is no question that these two different kinds of psycholinguistic variables can be distinguished at least in their functions in planning sentences.

Therefore, it is sufficient for the purpose of the present study to identify and set forth the functional difference between the propositional content and the contextual variables of a sentence from the viewpoint of sentence production. Furthermore, the present study concentrates on the psychological discourse notion of point of view and on its contextual effects on the propositional content and the alternative surface structures of sentences.

A main question to be addressed in this section is how one divides a continuum of experience of the inner as well as the outer world into several smaller sentential units which are then built into specific propositional contents. For example, the sentences of each of the following two pairs can be taken to mean the same event or happening in a story: *Tom sold the car to Mary* vs. *Mary bought the car from Tom* and *Tom wrote to Mary* vs. *Mary heard from Tom*. This can be discussed in terms of two major questions:

1. How does one choose to treat the transition of the car and the letter between *Tom* and *Mary* as the idea units of sentences?
2. How does one choose one specific proposition from among alternatives; namely, who is more likely to be treated

as an "agent" or "experiencer?"

In regard to the first, Clark and Clark (1977) proposed three criteria for the so-called "experience chunking": "conceptual salience," "verbalizability," and "pertinence to discourse." They also claimed that the following were conceptually salient enough to be verbalized: a) joints – points of rapid changes from one state to another; b) intervals – between these joints; and c) states – the situations with no change at all. It should be noted that it depends on their verbalizability and pertinence to the on-going discourse whether or not these conceptually salient units of experience are ultimately realized in terms of propositions and then utterances.

In regard to the second, Clark and Clark (1977) proposed a principle they called "simplicity criteria," according to which, when there exist alternative propositions to represent the same idea unit or event, one is most likely to choose the most natural or the simplest of them. Thus it is more likely that one says *A is above B* instead of *B is below A* and *The boy jumped before the dog barked* instead of *The dog barked after the boy jumped* on the grounds of perceptual and temporal naturalness, respectively (Clark & Clark, 1977, pp. 239-240).

However, it seems that the choices between *Tom sold the car to Mary* and *Mary bought the car from Tom* and between *Tom wrote to Mary* and *Mary heard from Tom* have to do with contextual naturalness; namely, which of *Tom* and *Mary* is the topic, the given information, and so on. In this case, the more important determinant of the contextual naturalness is the one whose actions or mental states a narrator or a speaker is trying to talk about or from whose point of view he is describing the on-going experience or events. For example, if the narrator is relating the story from *Tom's* point of view, he is most likely to choose *Tom sold the car to Mary* and *Tom wrote to Mary*, so as to describe the given events as *Tom's* action, not *Mary's*. Put another way, the narrator tends to refer to *Tom* both as the agent of actions and as the experiencer of mental states. In the present study, this is hypothesized as the Primary Effect Hypothesis (see Chapter 1).

Chafe (1977, 1979, 1980) argued that, in verbalizing experience, there was a significant parallel between a hierarchical organization of human memory and a hierarchical organization of human language. That is to say, the memories, episodes, thoughts, and foci of the memory organization seem to be reflected in the stories, paragraphs, sentences, and phrases, respectively, of the language organization. Furthermore, the idea unit of a sentence is assumed to be a basic amount of information necessary to human organisms or activities.

In this connection, Chafe (1980) stated the following:

> First, a speculation of the functional adequacy of focuses of consciousness. It seems likely that what can be embraced within a single focus is often too little to serve adequately the needs of the human organism. We might suppose that the basic

> adaptive function of a focus of consciousness is to alert the organism to some piece of information that is potentially useful to it. It may well be that the amount of information which will serve the organism best is often of an amount that overflows the very limited capacity of one focus. In such a case, it is necessary to allow several focuses to scan such information, in order that all of it can be comprehended and acted on. Such, I am suggesting, is the nature of what I will call a *center of interest* (a term taken from Buswell (1935: chap. 2)). Too great to be taken in at once with a single focus, it can be used and acted on only by allowing a series of focuses to play across it. It is the conclusion of this scanning of a center of interest, I would speculate, that is typically signaled with sentence-final intonation and syntactic closure. (p. 26)

From this, it follows that a sentence may be assumed to be composed of several phrases representing foci in regard to a certain specific "interest," for example, actions or mental images of particular objects, things, and people, conventional schemata, procedures for achievement of goals, etc. Chafe (1979) further stated:

> My guess at the moment is that people have in memory a large number of foci involving knowledge of particular objects, events, and so on plus a relatively small number of principles of coherence by which these foci can be organized into the larger units that appear in language as sentences. These principles of coherence have to do with unity in terms of images, schemas, goals, and the like. (p. 176)

It is worth mentioning that Clark and Clark's (1977) simplicity criteria for the propositional content of a sentence, discussed above, can be said to be basically consistent with these principles of coherence; that is, the planning of the propositional content of a sentence is biased by a certain schematic or conventional knowledge framework, namely, perceptual, temporal, and contextual naturalness of the simplicity criteria.

The important point is that the discourse notion of point of view or empathy may be viewed as one of those principles of coherence. In other words, the way the foci of a phrase level are organized into an idea unit of a sentence level is largely dependent on from whose point of view a narrator or a speaker is decribing the events or the happenings of the inner as well as the outer experience. For example, *Tom sold the car to Mary* and *Mary bought the car from Tom* can be claimed to consist of the same conceptual foci: "TOM," "BUSINESS TRANSITION," "CAR," and "MARY." If the narrator is more interested in *Tom's* actions, these foci are assigned the following semantic cases: "agent," "action-process," "patient," and "beneficiary," respectively; otherwise, they are assigned the following cases: "source," "action-process," "patient," "agent (and beneficiary)," respectively (Chafe, 1970; Fillmore, 1968). The point is that these resulting case structures of the propositional contents are clearly predictable from the narrator's specific interest either in *Tom's* actions or *Mary's* actions (Fillmore, 1977).

Therefore, it may be concluded that the Primary Effect Hypothesis of the present study is clearly in agreement with Chafe's (1979) notion of coherence or center of interest, by which the propositional content of a sentence may be built from its conceptual foci of the phrase-level. It is also evident that the Primary Effect Hypothesis is consistent with Clark and Clark's (1977) simplicity criteria, in particular, the contextual naturalness, for the planning of the propositional content of a sentence.

2.4 Discourse Functions of Alternative Surface Structures

In order to clarify linguistic marking devices for point of view, it will be helpful to review several principles of the correlations beween a narrator's or a speaker's psychological considerations of discourse context and the alternative surface stuctures of sentences. These correlations have been, for the most part, described in terms of an intonation system, namely, phonetic terms such as contrastive stress, sentence stress, and the like. For example, the given and new information of a sentence are characterized in terms of low pitch stress and sentence stress, respectively (Chafe, 1976; Clark & Clark, 1977).

However, as stated in Chaper 1, the present study focuses primarily on the alternative word orders within the surface structures of sentences with normal intonation contours, namely, noncontrastive sentence stress on the last noun phrase. In addition, the present study focuses on the following types of alternative word orders: (a) the surface orders of two NP's of symmetric predicates; (b) the surface orders of agent and patient NP's of active and passive sentences; and (c)the surface orders of direct and dative object NP's of two-object predicates (see Chapter 1).

In what follows, several principles attempting to account for contextual effects on the surface structures of sentences will be discussed in terms of two major points:

1. What kind of contextual factor is assumed to be the most important in the psychological considerations of discourse context?
2. What principles are proposed in order to account for the contextual effects in terms of such discourse information?

From a purely linguistic point of view, Creider (1979) argued that the so-called "movement rules" of transformational grammar should be defined in terms of the following two discourse functions, which Creider called "topicalization function," and "focusing function." That is, Creider assumed that discourse context might consist of two major information types: topic and focus.

According to their discourse functions, the movement rules of the English language can be divided into two types, which Creider (1979) called "Topicalization Rules" and "Focusing Rules." The topicalization rules are the following: "Topicalization," "Left-Dislocation," "Passivization," "Dative-Movement," "*About*-Movement," "Adverb-Fronting," "Particle-Movement," "Subject-Subject Movement," and "*Tough*-Movement." The focusing rules are the following: "Extraposition, (*It*-Insertion)," "*There*-Insertion," "Extraposition from NP (Relative Clause Extraposition)," "Complex NP Shift," and "Quantifier

Postposing." Taken together, these suggest that sentence initial and final positions are the targets of the topic and focus NP's, respectively, with regard to the English language.

Furthermore, Creider (1979) claimed that the basic syntactic orders of human languages, i.e., SVO, SOV, and VSO, and the positional strategies for locating topic and focus NP's were profoundly related. This suggests that, as shown above, the subject and object positions of sentences are somehow correlated with the moving directions of the topic and focus NP's. In SVO languages, e.g., English, Spanish, etc., initial and final sentential positions are more likely to be reserved for the topic and focus NP's, respectively; in SOV languages, e.g., Hungarian, Japanese, etc., topic and focus NP's tend to be in the initial and in the preverbal positions of sentences; and in VOS or VSO languages, e.g., Nandi, Tagalog, etc., topic and focus NP's tend to be in the final and the initial positions of sentences, respectively.

However, the following two questions can be raised: 1) How can the topicalization rules and focusing rules be interpreted from a psychological point of view, especially from the viewpoint of sentence production? 2) How should the interactions between the notions of topic and focus and other possible discourse notions be treated?

It is important to note initially that Creider (1979) restricted his arguments and considerations to purely linguistic ones, ignoring any psychological consideration clearly associated with the topicalization and the focusing functions. Therefore, it can not be answered how one should interpret Creider's notion of discourse context and its correlations with the movement rules from the viewpoint of sentence production, which is of theoretical importance for the present study.

Secondly, the only criterion for topic and focus that Creider (1979) specified is whether or not they are "part of the assertion." In other words, topic is not "part of the assertion," while focus is. Nevertheless, it does not seem to be clear how the discourse notions of topic and focus can be distinguished from other discourse notions, in particular, given and new information.

For example, this confusion can readily be seen from his following arguments for the topicalization function of Passivization and Dative Movement:

6) a. What did John do?
   b. #The artwork was done by John.
   c. John did the artwork.
7) a. Who was the artwork done by?
   b. The artwork was done by John.
   c. #John did the artwork.
8) a. What did you do with the pennywhistle?
   b. I gave the pennywhistle to George.
   c. #I gave George the pennywhistle.

9) a. What did you give to George?
b. I gave George the pennywhistle.
c. #I gave the pennywhistle to George.

(Creider, 1979, p. 6)

("#" indicates that the sentence is not ungrammatical, but less acceptable as the answer to the first WH-question of each set.) The argument is that, by the first question of each set, *John*, *artwork*, *pennywhistle*, and *George*, are established as the topic of each discourse context; and that Passivization and Dative Movement are obligatory in the cases in which the logical and the dative object NP's, respectively, are the topics of the discourse context. However, it can be argued that these sets of question-answers may also be accounted for by the discourse phenomenon of given-new information structures: given information tends to precede new information under normal intonation contours. Accordingly, the lesser acceptability of (6b) and (7-9 c) could be attributed to the unexpected constituent orders: new information precedes given information.

A similar ambiguity in the distinction between topic and focus on the one hand and a given-new information structure on the other can be found in Dik's (1978) treatment of pragmatic functions (or wider context under which an utterance is produced). Dik, in fact, refused to treat given-new information as an independent pragmatic function, focusing on only two types of pragmatic functions: "theme vs. tail" and "topic vs. focus." However, it seems that there is no reasonable justification for his refusal of the pragmatic function of given-new information (cf. Halliday, 1970; Symth, Prideaux, and Hogan, 1979; Prideaux, 1981).

Erteschik-Shir (1979) proposed a new discourse notion, which she called "dominance," suggesting that, as shown below, some syntactic constraints on Dative Movement be accounted for by resort to the dominance status of direct and dative object NP's. Erteschik-Shir (1979) defined the discourse notion of dominace as follows:

> DOMINANCE: A constituent *C* of a sentence *S* is dominant in *S* if and only if the speaker intends to direct the attention of his hearers to the intension of *C* by uttering *S*. (p. 443)

This can be taken to mean that, in planning sentences, a speaker tends to select one particular constituent as being most significant and he seeks to direct the hearers' attention to it by means of linguistic devices, e.g., word orders, intonation systems, and so on. In addition, such a dominant constituent is, consequently, a natural candidate for the topic of further conversation.

Erteschik-Shir (1979) mentioned two cases in which the notion of dominance could be viewed as discourse information. First, given a WH-question, the NP of the next sentence is necessarily dominant which answers the WH-pronoun. As an instance, let us consider the following:

Speaker A: Who did you see?

Speaker B: I saw Paul. (Erteschik-Shir, 1979, p. 445)

The NP *Paul* of the second sentence is no doubt dominant since, by the WH-question, Speaker A suggested to Speaker B that Speaker B should direct Speaker A's attention to the NP *Paul* which answers the WH-pronoun *Who*. It is, however, rather obvious that, in this case, the notion of dominance does not differ from the notion of focus or new information (see Chomsky, 1971; Jackendoff, 1972).

The second case is the so-called "extraction phenomena" of discourse. For example, the dominance status of a embedded clause *Mary kissed Bill* is different in the following two sentences: *John said that Mary kissed Bill* and *John mumbled that Mary kissed Bill*. This is because, as shown below, the embedded clause of the former can be extracted as an independent constituent of the next sentence, while that of the latter can not:

10) a. Speaker A: John said that Mary kissed Bill.
Speaker B: That's a lie, she didn't.
(or similarly: That's amusing, I never thought she would, etc.)

----

c. Speaker A: John mumbled that Mary kissed Bill.
Speaker B: ?? That's a lie, she didn't.
(Note that replacing "is a lie" by "is true," "is

"amusing," "is highly probable," etc. does not improve Speaker B's response.)

(Erteschik-Shir, 1979, p. 444)

(Note that "??" indicates that the sentence is less than acceptable.) It is also clear that neither *Mary* nor *Bill* can be assigned the dominant status, since, as Speaker B's response, both of *I know which Mary it is* and *I know which Bill it is* are less acceptable; namely, neither *Mary* nor *Bill* can be extracted by *it*. Accordingly, the dominant constituent of the latter may be said to be the next bigger constituent, i.e., the matrix clause.

However, an interesting point can be made: if *John mumbled that Mary kissed Bill* is an answer to the question *What did John mumble*, the embedded clause can, by definition, be viewed as being dominant. Therefore, it does not seem that the notion of dominace is clear enough to be unambiguously distinguished from other discourse notions, especially, focus, given, and topic.

Erteschik-Shir (1979) proposed the following dominance hierarchy, using the extraction criterion described above: indefinite NP's > definite NP's (definite NP's with a relative clause > definite NP's without a relative clause) > proper noun > pronoun. (">" indicates that it is easier for the left-hand NP to receive the dominant status of the sentence than the right-hand NP.)

Erteschik-Shir then suggested that the following subtle syntactic constraints on Dative Movement be accounted for in terms of the dominant hierarchy, namely, the dominant status of direct and dative object NP's:

11) a. John gave it to Mary.
    b. *John gave Mary it.
12) a. Who did John give the book to?
    b. *Who did John give the book?
13) a. Mary was given the book.
    b. *Mary was given the book to.
(Erteshik-Shir, 1979, p. 449)

("*" indicates that the sentence is ungrammatical.) The argument is as follows: the ungrammaticality of (11-13 b) can be attributed to the dominant status of the direct object and the dative object NP's. That is, when the dative object NP's are higher on the dominant hierarchy than the direct object NP's, the application of Dative Movement results in the ungrammatical sentences, i.e., (11b) and (12b). When the dative object NP's are lower than the direct object NP's, Dative Movement is obligatory (see (13 a, b)).

From this, Erteschik-Shir came to the following hypothesis of the correlation between the surface orderings of two object NP's and the discourse notion of dominance:

> *In the structure ...* V NP1 NP2 (*derived from ...* V NP2 *to/for* NP1) NP1 *is nondominant and* NP *is dominant*. (p. 449)

Put another way, the less dominant NP tends to be in the postverbal position; the more dominant NP in the final position. From the viewpoint of discourse context, this may be taken to mean that the more likely NP's are to be extracted as the topic of further conversation, the more likely they are to be in sentence final positions.

It seems that the dominance hierarchy is, in a sense, quite similar to Ransom's (1977) constraint on Dative Movement and Passivization, called "Definiteness - Specificity Constraint." That is to say, the more dominant NP's are, the less definite they are; and the less definite NP's are, the more likely they are to be in sentence final positions and to be extracted as the topic of further conversation. Ransom defined the Definiteness - Specificity Constraint as follows:

> If an advanced NP is lower on the Definiteness - Specificity Hierarchy than the NP it replaces, the sentence will be less acceptable. (p. 420)

As the Definiteness - Specificity Hierarchy, Ransom presupposed definite-specific, indefinite-specific, and then indefinite-nonspecific.

The important point is that the Definiteness - Specificity Constraint interacts with the Humanness-Animacy Constraint, discussed in Chapter 1 in connection with the Humanness Interaction Effect Hypothesis. This can be readily seen from the following pairs of sentences:

14) a. ?They fed the lion the Christian.

b. They fed the lion a Christian.

15) a. ?The cat was attacked by the man.

b. The cat was attacked by a man.

(Ransom, 1977, pp. 422-425)

("?" indicates that the sentence is grammatical, but less acceptable.) Note that (14a) and (15a) are less acceptable, since the animal NP's, *lion* and *cat*, are shifted to the left of the human NP's, *Christian* and *man*, respectively, but they both became acceptable in (14b) and (15b) in which the two NP's, *Christian* and *man*, are demoted on the Definiteness - Specificity Hierarchy.

This significant interaction is Ransom's (1977) very motive to reconcile these two hierarchies under a discourse notion of empathy. According to her Empathy Hierarchy, additionally computed from the two hierarchies, the acceptability of (14b) and (15b) can be accounted for as follows: the two definite and animal NP's, *the lion* and *the cat*, can be considered to be as high on the Empathy Hierarchy as two other indefinite and human NP's, *a Christian* and *a man*, respectively. As a result, Ransom (1977) proposed the following constraint on Dative Movement and Passivization which she called the "Empathy Constraint":

> If an advanced NP is lower on the Empathy Hierarchy than the NP it replaces, then the sentence is less acceptable. (p. 426)

It is also evident that, as implied in Chapter 1, Ransom's Empathy Constraint is consistent with Kuno and Kaburaki's

(1977) Surface Structure Empathy Hierarchy, except that Ransom restricted her arguments to Dative Movement and Passivization.

It is clear enough that Erteschik-Shir's (1979) notion of dominance and Ransom's (1977) notion of definiteness of NP's can be viewed as discourse information, aiming to account for the discourse functions of the alternative surface structures of sentences, in particular, Dative Movement and Passivization.

As stated in preceding sections, the given-new strategy or contract may be claimed to be a rather successful explanation of the correlation between the psychological considerations of discourse context and the surface structures of sentences (e.g., see Clark & Haviland, 1977; Haviland & Clark, 1974). The basic assumption of the given-new strategy can be traced back to Grice's (1975) "cooperative principle" between a speaker and the hearer (see section 2.2).

The main effort of these researches (e.g., Clark & Haviland, 1977; Haviland & Clark, 1974) is focused on the given information of discourse context and on its psychological or linguistic effects on sentence comprehension and production. It should be noted that, as stated in section 2.2, Halliday's (1970, 1973) notion of given information had to do with whether or not the information is derivable from preceding discourse. Furthermore, it seems that Halliday's and Clark and

Haviland's (1974) notion of given information contains Chafe's (1976) notions of givenness and definiteness (see section 2.2). On the other hand, Chafe's (1976) notion of given information is based on human consciouness, i.e., a kind of short-term or working memory, which is assumed to be one of the basic underlying components of human thinking and verbal behavior (also see Chafe, 1979, 1980).

In several psycholinguistic experiments, it has been shown that given information tends to precede new information (Bock, 1977; Bock & Irwin, 1979; Smyth, Prideaux, & Hogan, 1979; Tannenbaum & Williams, 1968). This word order tendency of given and new information seems to be predictable from information processing considerations of human beings. According to the given-new contract, a listener has to identify the direct or indirect antecedent of the given information by searching his memory, before he can integrate the new information into the antecedent. In addition, the listener can not start searching memory for the antecedent, unless given some specific information as the given information.

Therefore, from a listener's point of view, it may be hypothesized that given-new word order serves to reduce the memory and processing load of the listener. If a speaker is a cooperative participant in a discourse, he may intuitively follow the given-new word ordering principle in his sentence planning. As pointed out below, this is consistent with Bock and Irwin's (1979) explanation of the given-new word order phenomena.

The experimental results of Bock (1977) and Bock and Irwin (1979) showed that the subjects tended to follow the given-new ordering principle in producing answers to WH-questions and that this ordering tendency could be found across a number of syntactic types of answers. Interestingly enough, Bock and Irwin (1979) attributed the given-new ordering phenomena to two psychological factors: the given information's referential availability at a conceptual or memory level and referential availability at a linguistic level. They stated:

> ... using information that requires little processing may facilitate sentence production. Information previously formulated for inclusion in a sentence, or readily retrieved from memory for the preceding discourse, may be more available for production than new information. If this readily available information is prepared for production earlier than other information, given-new ordering may be explained as the result of either availability at the conceptualization level or availability at the assembly level. (p. 468)

It is important to note that they attempted to account for the near-universal order of given and new information from the viewpoint of the information processing system of human beings.

Smyth, Prideaux, and Hogan (1979) reported similar experimental results in regard with the surface orderings of direct and dative object NP's. From a psycholinguistic point of view, they came to conclude the following generalization:

(a) If one NP is Given and another is New, the

> relative syntactic order is Given-New, with the New NP under sentence stress; the order New-Given may occur only if the New NP is under stress.
> (b) If both NP's are either Given or New, either order may occur. (p. 40)

In addition, Prideaux (1979) suggested that psychologically valid linguistic rules or devices should be viewed as mapping the intended message of a speaker directly to surface structures of a sentence. Put another way, such rules specify how each element of information of the message level is realized by means of word orders, affixes, functional words, and the like within the surface structures. The point is that the mapping rules seem to be plausible as psychological processes of human verbal behaviors. Moreover, they are to be formulated on the basis of significant generalizations in the correspondences between the message level and the surface structure level, for example, the given-new ordering generalization described above.

From a psycholinguistic point of view, Osgood and Bock (1977) attempted to account for the alternative word orders of a sentence in terms of the so-called "salience" of each constituent. That is to say, the more salient the constituent, the earlier it is produced in sentence production. The notion of salience was assumed to be somehow calculated from three interrelated factors: "Naturalness," "Vividness," and "Motivation of Speaker." It should be noted that these three factors interact with each other in accounting for the word orders in question and that

that is the very reason why the notion of salience is proposed.

First, it is assumed that a basic unit of human perception or cognition can be represented by the following three ordered elements: M1 – M – M2, where M1 is the meaning of the perceived entity; M2 the meaning of the other perceived entity; and M the meaning of one perceived relation, e.g., action or state, between M1 and M2. It is also assumed that M1 is perceived before M2 and that M is more associated with M1 than with M2. (More complicated cognitions consist of a set of hierarchically interrelated cognizing units.) Osgood and Bock (1977) suggested that, from a linguistic point of view, the perceived entities and relation of M1, M2, and M should be taken to correspond to ACTOR, RECIPIENT, and ACTION, respectively, with regard to the actin relation or FIGURE, GROUND, and STATE, respectively, with regard to the state relation. The former type of sentences are the following: *Tom hit Mary, Tom broke the window*, and so on. The latter type of sentences are the following: *Tom is tall, A ball is on the table*, and so on.

What is meant by the "Naturalness" factor is that the natural order of sentence constituents may correspond to the natural order of human cognition: M1 is before M2. Therefore, it is most natural and salient that the ACTOR and the RECIPIENT are realized as the surface subject and the surface object, respectively, as in SVO or SOV languages, unless the salience of the RECIPIENT is increased because of the two other facotors.

The next factor, "Vividness," is defined as referring to an affective or emotional meaning of each perceived entity or its linguistic equivalent, e.g., the *the vampire* versus *the man*. As a result, it is hypothesized that sentence constituents having relatively high vividness tend to be moved into the earlier sentential positions.

The third factor, "Motivation of Speaker," has to do with the speaker's own motivation such as interest, concern, ego involvement, etc., for some specific perceived entity or its linguistic equivalent. Sentence constituents with such high motivation may be assumed to appear in the earlier sentential positions in planning sentences. It is worth mentioning that the motivation of speakers is assumed to be reflected in discourse context; that is to say, the motivation of speakers may be taken to indicate their psychological considerations of discourse context, or at least results of these considerations.

The interaction among these three factors of salience can be readily seen from the following active-passive alternatives: *John killed Mary* and *Mary was killed by John*. According to Osgood and Bock (1977), the function of Passivization is to reflect the high vividness of and/or the speaker's high motivation for the referent of *Mary*, even though it results in decreasing the naturalness of the agent-action-recipient ordering. That is, the relative salience of the referent of *Mary* is high enough to sacrifice the salience of the natural word ordering; and that is the very reason why the speaker may choose to use the passive structure instead of the active.

However, Bock (1977) argued that given-new ordering phenomena did not necessarily seem to be consistent with the salience principle. For example, the motivation of speakers can also be interpreted to be for new information as well as for given information; that is, which of given and new information is more salient? Bock also claimed that children tended to employ the new-given ordering strategy more than the given-new ordering strategy, while adults the given-new ordering strategy. These phenomena seem to raise certain subtle questions with the salience principle. Consequently, as stated earlier, Bock and Irwin (1979) attempted to account for the given-new ordering from a somewhat different point of view, namely, in terms of given information's referential and lexical availability.

Zubin (1979) claimed that subject selection is profoundly correlated with a cognitive property of human perception. It was then suggested that a tendency for the referents of subject NP's to be higher in an egocentric scale reflects the cognitive properties, called "selectional attention" and "egocentric bias," of human perception. Zubin also proposed the following hypothetical egocentric scale: Speaker > Hearer > Other Human (Central > Peripheral) > Concrete (Inanimate) > Abstract Human > Abstract, where the central-peripheral distinction refers to the distinction between main characters and minor characters in a story and the category, Abstract Human, refers to an abstract concept such as "thought" and "knowledge" which may relate specifically to human beings. From this, it was hypothesized that the higher NP's are on this scale, the more likely they are to be selected as the surface subject NP's of the sentences.

However, it can be easily seen that this egocentric scale may, to some extent, parallel the empathy hierarchy. In other words, a narrator or a speaker may have preferential interest in his own points of view or in the point of view of the entities close to himself. Therefore, it can be argued that the egocentric scale may be, in some sense, in correspondence to the difficulty which the narrator or the speaker may have in identifying himself with other people, animals, or things. In fact, this is the very basis of the Humanness Interaction Effect Hypothesis (see Chapter 1). It is of theoretical interest to see how these different notions, egocentric bias and empathy, correlate with each other in accounting for the alternative surface structures in question.

In summary, it can be concluded that several discourse notions or their psychological considerations may, to some extent, account for the discourse functions of alternative surface structures, namely, differences in surface meanings (see Chapter 1). In other words, the alternative surface structures can be described in terms of such discourse notions. However, it is rather suprising to note that the notion of point of view or empathy has never been discussed in detail as such, even though it is one of the best established psychological aspects of discourse context, at least in the rhetoric literature. It is, therefore, of great importance to investigate the psychological reality of point of view and its contextual effects on the alternative surface structures in question. This is characterized in terms of the four basic hypotheses in the present study (see Chapter 1).

3. EXPERIMENTS

3.1 Preliminary Remarks

The present study focuses on the contextual effects of point of view and a given-new information structure on the planning of propositional contents and surface structures of sentences. For this purpose, the contextual effects have so far been characterized in terms of four different but related hypotheses: the Primary Effect, Secondary Effect, Humanness Interaction Effect, and Positive Additive Effect Hypotheses, each of which was discussed in detail in Chapter 1. In order to test these four hypotheses, three different experiments were designed and carried out independently of each other.

3.2 Experiment 1

3.2.1 Purpose

The purpose of Experiment 1 is to test the Primary Effect Hypothesis. The Primary Effect Hypothesis was first divided into the following testable hypotheses: *Primary Effect Hypothesis*. The character established as the target of the contextual factor of point of view is:

1. more likely to be referred to as either the agent (of an action) or the experiencer (of a psychological state) than as any other semantic case;
2. more likely to be referred to as either the agent or the experiencer than any other character;
3. more likely to be realized as the surface subject of a sentence than as any other grammatical role; and
4. more likely to be realized as the surface subject than any other character.

Furthermore, there should be a significantly high correlation between the frequencies with which characters are treated as the semantic agent or experiencer and the frequencies with which the characters are realized as the surface subjects of sentences.

For the sake of convenience, the first two hypotheses are hereafter designed as the "Propositional Hypotheses 1 and 2"; the next two the "Syntactic Hypotheses 3 and 4"; and the last is referred to as the "Correlation Hypothesis."

3.2.2 Method

Subjects. Ten subjects, five females and five males, volunteered to participate in Experiment 1. The subjects were either undergraduate or graduate students of University of Alberta. All the subjects were native speakers of North

American English.

Materials. Two short stories were selected from Aesop's fables and then somewhat modified for the purpose of Experiment 1. Their original titles are "A MILLER AND HIS SON" and "A PARROT AND A CAT." Hereafter, the two stories will be referred to as Story 1 and Story 2, respectively. (For the modified versions of the stories, see Appendix A.)

The selections and modifications of the two stories were made on the basis of the following criteria:

1. Two characters in a story are equally important with regard to story grammar or story plot, so that both can be considered to be main characters or protagonists of the story.
2. The style of a story has to be an omniscient point of view, as discussed in section 2.2, in which the narrator takes the points of view of the two characters almost equally.
3. As a result of a propositional analysis, the two characters are equally often referred to as an agent and/or as an experiencer.

The details of the propositional analysis will be discussed in the following sections.

The main purpose of these criteria stemmed from the fact that, unlike some other discourse studies, the purpose of Experiment 1 was not to see whether or not the subjects' summaries of short stories were consistent with a certain schematic plot or story grammar, but instead to see how the subjects reorganize and then rephrase the short stories under different points of view (cf. Kintsch and van Dijk, 1978; Rumelhart, 1975, 1977; Thorndyke, 1977). The subjects were not expected to rephrase the stories on the basis of other possible contextual factors such as topic and a main or minor character, but instead only on the basis of the contextual factor of point of view or a psychological bias towards one particular character and against the others.

Procedures. The two stories were recorded into a cassette tape in the Recording Room at the Department of Linguistics, University of Alberta. A female graduate student volunteered to read the stories for the recording.

The same experimental procedure was carried out by the subjects for Story 1 and Story 2 with a three-minute interval. The presentation orders of the two stories were in fact randomized. The task of the subjects was to listen to a story on the cassette recorder twice with a five-second interval and then immediately to rephrase or rewrite the content of the story from the point of view of one of the two characters. The point of view was specified on the top of the answer sheet, which was provided immediately after the listening phase was completed. Each subject was randomly assigned one of the two possible points of view in Story 1, namely, *father's* or *son's*, and one of the two possible points of view in Story 2, namely, *parrot's* or *cat's*.

The subjects carried out the experiment individually or in pairs in the Phonetic Laboratory at the Department of Linguistics. On the average, it took the subjects 25 minutes to finish the listening and rephrasing tasks for the two stories.

Before beginning the experimental task, each subject read a one-page instruction sheet. In addition to the procedures of the rephrase task, the following points were emphasized in the written instructions: a) all the characters are humanized, regardless of whether they are animals (or birds) or things; b) the subjects do not have to memorize the stories word by word, but instead to understand what is going on in the stories; and c) the subjects are advised to use their own words in the rephrase task. Furthermore, the subjects were allowed to spend as much time as they wished to in the rephrase task and to write as much as they wanted. It was also suggested that the subjects might refer to the target characer of point of view as first person pronouns, *I*, my, and *me*. It should be noted that the main reason for the use of the first person pronouns was to help the subjects identify themselves with or to have a psychological bias towards the target character of point of view. In other words, the subjects were expected to rephrase Story 1 and 2, written from a neutral or omniscient point of view, as first person participant point of view stories (see section 2.2).

3.2.3 Analyses and Results

Before going to the details of the analyses, it is useful to examine a few subjects' rephrased stories. For this purpose, four subjects' rephrased stories are found in Appendix B.

Rephrase task. A preliminary analysis was carried out on the rephrased stories in order to see whether or not one particular point of view which was given for the rephrase task caused the subjects to have more difficulty of some kind in rephrasing the content of the story than the other. As a reliable indication of such difficulty, a simple word-counting method was adopted, including function words such as *the*, *a*, *and*, etc.

It was shown that the mean word numbers of the rephrased stories under *son's* and *father's* point of view were 247.80 and 225.80, respectively and the standard deviations 41.50 and 52.17, respectively. The word number of the original Story 1 was 326. Neither a *F*-test nor a *t*-test showed that there were significant differences between the two variances and the two means of the two independent subject groups.

In the case of Story 2, the mean word numbers of the rephrased stories under *parrot's* and *cat's* point of view were 192.60 and 173.20, respectively; and the standard deviations 18.53 and 39.65, respectively. The word number of the original Story 2 was 298. It was also shown, as a result of a *F*-test and a *t*-test, that there was no significant difference between the two variances and the two means of the two independent subject groups.

From this, it could be concluded that, as far as the word numbers of the rephrased stories were concerned, the difference between the two specified points of view for the rephrase task did not lead to a significant difference in dificulty between the two rephrase tasks. This could also be taken to mean that the criteria for the selections and modifications of the stories were satisfied. That is, the stories and their two characters had to be neutral with regard to story grammar and the narrator's point of view.

Propositional analysis. In order to test the Propositional Hypotheses 1 and 2, a propositional analysis was carried out on the original and rephrased stories. Following a conventional method of propositional analysis, it was decided to employ Chafe's (1970) semantic case relations, Kintsch's (1974) "text base," and Norman and Rumelhart's (1975) "propositional network model of human memory." The following were assumed to constitute a predicate of a single proposition: main verbs of independent and dependent clauses, sentence adverbs (i.e., subject- or speaker-oriented adverbs (Jackendoff, 1972)), nominalizations, and manner adverbs. The dependent clauses included infinitives, gerunds, present and past participle clauses, and adverbial dependent clauses.

So-called "action-process" or "causative" verb such as *kill, surprise, break,* etc. were decomposed and analyzed in terms of primitive predicates (Lakoff, 1965; Norman and Rumelhart, 1977). For example, the English transitive verb *upset* in *The cat upset me (=parrot)* was in fact decomposed into three hierarchically related propositions: ((THE CAT DO SOMETHING) CAUSES (THE PARROT BECAME UPSET)). *The cat* was then counted as an agent of the action of doing something; *the parrot* as an experiencer of the psychological predicate, *became upset*. According to some psychological models of memory representation, the above decomposition might be ((THE CAT DO SOMETHING) CAUSES STATE-CHANGE from (THE PARROT IS NOT UPSET) to (THE PARROT IS UPSET)). However, it was decided that the first decomposition would be sufficient for the purpose of the propositional analysis of Experiment 1.

Since, as mentioned earlier, the style of the rephrased stories could, to some extent, be viewed as "first person participant point of view," the so-called "speaker-oriented" adverbs or adverbial phrases were analyzed as predicating a target character of point of view. For instance, suppose that a subject is asked to rephrase Story 2 from *parrot's* point of view. Then a sentence *Surprisingly, (or to my surprise), the cat ate all the food* could be paraphrased by *It seems (to me=parrot) surprising that the cat ate all the food*, or *I (=parrot) considered it surprising that the cat ate all the food*. In this case, *the parrot* can be counted as an experiencer of the psychological predicate *seems to* or *consider*; *the cat* as an agent of the action, *ate all the* *food*.

On the other hand, if the surface subject of the above sentence is the target character, *parrot* instead of *cat*, the paraphrase may be *It seems (to the subject) suprising that I (=parrot) ate all the food*. That is, it was assumed that the subjects expressed his own point of view, not *parrot's*. However, this kind of speaker-oriented adverb was not, in fact, found in the propositional analyses.

In the case of subject-oriented adverbs or adverbial phrases, the following paraphrases were made: *Anxiously, the cat looked for more food - The cat was anxious to look for more food. The cat* was then counted as an experiencer of the psychological predicate *be anxious to* and also as an agent of the action *look for more food*.

With regard to the psychological predicate, *anxious to*, the following should be noted: given the point of view of *parrot* for the rephrase task, every psychological predicate of *cat* had to be interpreted to indicate *parrot's* subjective interpretation of *cat's* mental state. This was because the style of the rephrased stories was the "first person participant point of view." Following these suggestions, the above sentence had to be *It seems to me (=parrot) that, anxiously, the cat looked for more food*. Then *parrot* had also to be counted as an experiencer of the psychological predicate, *seems to*.

However, as can be seen in Appendix B, the results of the rephrase task rather suggest that such a perfect or an

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ideal identification with or a bias towards a target character was, in practice, impossible for the subjects and that the style of the rephrased stories was instead somewhere between the omniscient and the first person participant point of view. Therefore, it was decided that, for the sake of the propositional analysis, this second level of paraphrasing was not necessary. It is important to note that, in the rephrase task, the subjects were not necessarily expected to totally identify themselves with a target character, but rather to have at least a psychological bias towards the target character and against the other non-target characters. In the present study, this is precisely what is meant by "a narrator describes the same idea from one particular point of view rather than the other" (see section 2.2).

Other adverbial phrases such as *in dismay*, *without any shame*, and *feel at home* were paraphrased by *be dismayed*, *be not ashamed of*, and *feel comfortable*, respectively.

Another important point to be clarified with the propositional analysis was that semantic cases, agent and experiencer, could not necessarily be distinguished unambiguously. For example, a predicate *watched* in *I (=parrot) watched the cat eating all the food* can be interpreted to refer either to the subject's psychological sensory process or to his willful activity of watching (Jackendoff, 1972; Fillmore, 1971; Maratsos, 1979).

For the purpose of the propositional analysis, it was decided that the semantic cases, agent and experiencer, were operationally defined, following Chafe's (1970) criteria rather than Jackendoff's (1972). Chafe (1970, p. 109) defined the agent as "... a thing which has the *power* to do something, a thing which has a force of its own, which is self-motivated." Chafe (1970, p. 145) also defined the experiencer as "... one who was mentally disposed in some way." Therefore, the experiential verbs were operationally defined as referring to the psychological activities such as perception, sensation, thinking, etc.

The propositional analysis focused on the numbers of times a particular character was referred to as either an agent, an experiencer, or other semantic case (e.g., patient, complement, and beneficiary), respectively, in the propositional contents of sentences. As a result, these three frequencies were obtained for each of the characters in Stories 1 and 2. For the sake of convenience, the set of the three frequencies is hereafter referred to as the "semantic index of character."

In Story 1, the semantic indices of *father* and *son* were (6 6 0) and (8 6 0), respectively; the first, the second, and the third numbers are for the agent, the experiencer, and other semantic case, respectively. In Story 2, those of *parrot* and *cat* were (15 8 10) and (15 9 9). It is important to note that, as implied by these figures, Stories 1 and 2 might be conceived of as being neutral with regard to the semantic indices of the two characters as well as with regard to the story style; that is, having an omniscient point of view.

As a result of the propositional analysis, Tables 1 and 2 show the mean semantic indices for characters in the five subjects' rephrased versions of Story 1 and 2, respectively. It was clear enough that these results of the propositional analysis suggested that, when the subjects were asked to rephrase the stories from one particular character's point of view, they tended to refer to him either as an agent or as an experiencer in planning the propositional contents of sentences.

An analysis of variance was performed for the semantic indices of the characters, in order to test the Propositional Hypotheses 1 and 2. The three within-subject independent variables were Story Type (Story 1 vs. Story 2), Semantic Case (Agent, Experiencer, vs. Others), and Consistency (Consistent vs. Inconsistent). The Consistent condition was defined as the case in which the given point of view for the rephrase task was paired with the target character's semantic index. For example, in Story 1, if the target character is selected as *father* (i.e., given point of view = *father's*), then the number of times the *father* appears as an agent, an experiencer, or other semantic case under that given point of view constitutes one of the Consistent cases. This case is labelled "*father/ father*" or "F/F." The number of times *son* appears as an agent, an experiencer, or other semantic case

Table 1

Mean Semantic Indices of *Father* and *Son*

Point of View	Semantic Case	*Father*	*Son*	*Father+Son*	Others
Father	Agent	5.60	4.20	11.00	8.60
	Experiencer	4.60	1.80	2.60	3.40
	Other Case	0.40	0.40	4.40	29.60
Son	Agent	4.80	5.40	13.40	8.80
	Experiencer	1.20	4.80	4.60	2.20
	Other Case	0.60	0.40	6.40	31.20
Original	Agent	6.00	8.00	13.00	13.00
	Experiencer	6.00	6.00	2.00	3.00
	Other Case	0.00	0.00	6.00	33.00

Table 2

Mean Semantic Indices of *Parrot* and *Cat*

Point of View	Semantic Case	*Parrot*	*Cat*	*Parrot+Cat*	Others
Parrot	Agent	11.80	7.40	0.80	0.20
	Experiencer	5.80	4.60	0.80	0.40
	Other Case	5.80	5.80	0.60	21.60
Cat	Agent	8.60	10.60	2.40	0.00
	Experiencer	4.40	7.40	0.80	0.00
	Other Case	6.00	3.60	0.40	20.40
Original	Agent	15.00	15.00	1.00	1.00
	Experiencer	8.00	9.00	1.00	0.00
	Other Case	10.00	9.00	2.00	14.00

(i.e., *son's* semantic index) under the given point of view of *father* constitutes an Inconsistent case (i.e., "*father/son*" or "F/S"). Therefore, there were four Consistent cases (F/F, S/S, P/P, and C/C) and four Inconsistent cases (F/S, S/F, P/C, and C/P). (Note that "P" and "C" indicate *parrot* and *cat* in Story 2, respectively.)

As shown in Table 3, the main effects of the three factors were shown to be significant: $F(1,9)=433.5$, $p<0.01$ for Story Type; $F(2,18)=37.2$, $p<0.01$ for Semantic Case; and $F(1,9)=41.6$, $p<0.01$ for Consistency. More importantly, the following interaction effects were also significant: $F(2,18)=4.6$, $p<0.05$ for Story Type x Semantic Case and $F(2,18)=9.6$, $p<0.01$ for Semantic Case x Consistency. These interaction effects are as shown in Figure 1.

The significant interactions suggested that the semantic indices of the target character and the non-target character were significantly reversed between Agent and Experiencer on the one hand, and Others on the other (see Figure 1). This means that the target character was much more likely to be referred to as either the agent or the experiencer of the propositional contents of sentences (i.e., a Consistent case) than as any other semantic case, supporting the Propositional Hypothesis 1. Furthermore, the targent character was shown to be much more likely to be treated as either the agent or experiencer than the non-target character (i.e., an Inconsistent case), supporting the Propositional Hypothesis 2.

Table 3

Results of Analysis of Variance

Source[1]	S. S.	D.F.	M. S.	F Ratio	Significance[2]
S	128.500	9	14.278	–	
A	472.034	1	472.034	433.509	**
AS	9.800	9	1.089	–	
B	56.033	1	56.033	41.565	**
BS	12.133	9	1.348	–	
AB	0.000	1	0.000	0.000	
ABS	18.167	9	2.019	–	
C	407.117	2	203.558	37.179	**
CS	98.550	18	5.475	–	
AC	34.817	2	17.408	4.551	*
ACS	68.850	18	3.825	–	
BC	62.517	2	31.259	9.566	**
BCS	58.817	18	3.268	–	
ABC	18.149	2	9.075	2.506	
ABCS	65.183	18	3.621	–	

[1] S - Subject.
A - Story Type (Story 1 vs. Story 2).
B - Consistency (Consistent vs. Inconsistent).
C - Semantic Case (Agent, Experiencer vs. Other Case).

[2] '*' and '**' indicate $p<0.05$ and $p<0.01$, respectively.

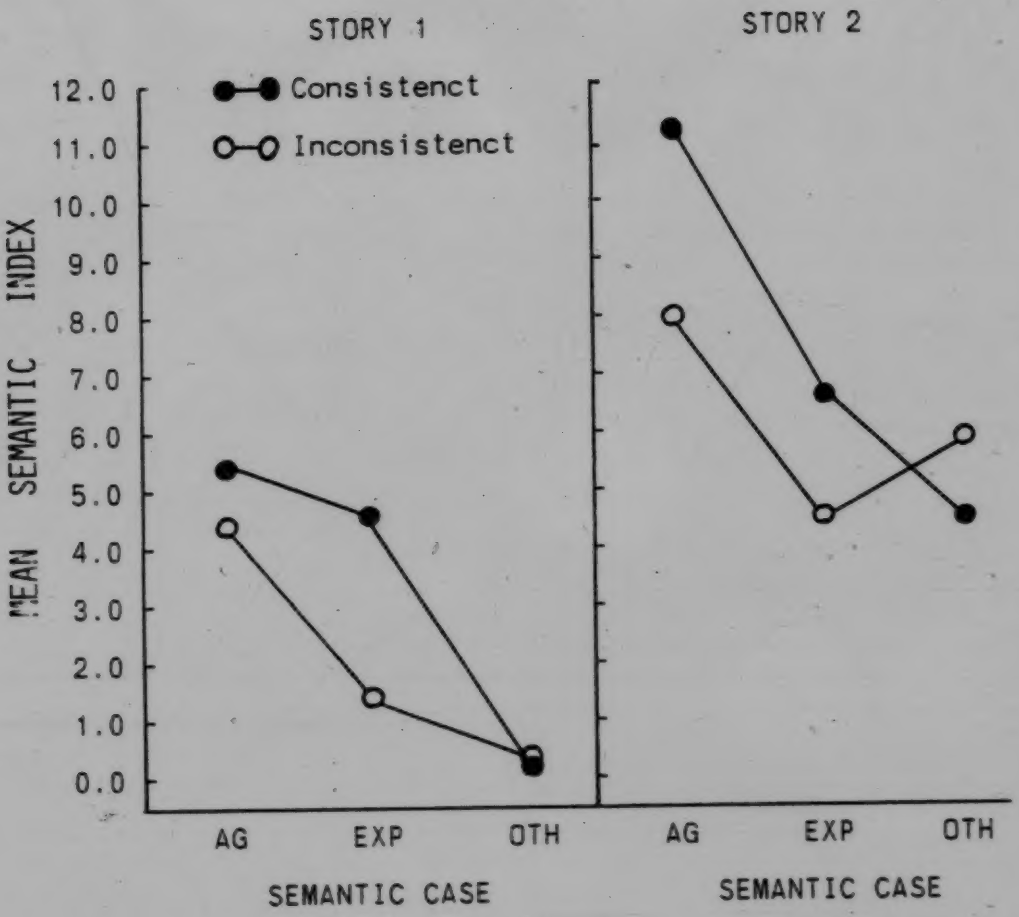

Figure 1. Interaction of Semantic Case by Consistency for Each Story (AG - Agent, EXP - Experiencer, and OTH - Other Semantic Case).

Surface subject/object analysis. An analysis, which is here called the "surface subject/object analysis," was performed on the rephrased stories to test the Syntactic Hypotheses 3 and 4. The procedure of this analysis was rather simple. The analysis focused on the frequencies with which the characters in Story 1 and 2 were realized as either the surface subjects of clauses or some sort of surface objects (i.e., direct or indirect object and objects of prepositions). The two frequencies (i.e., for subjects and for objects) were obtained for each of the characters in Stories 1 and 2. For the sake of convenience, these frequency pairs are hereafter referred to as the "syntactic index of character."

As shown in Tables 4 and 5, the results of the analysis were consistent with the hypotheses of the present study. That is to say, when the subjects were asked to rephrase the neutral story from one particular character's point of view, they consistently tended to realize the target character as surface subjects more frequently than the other character.

An analysis of variance was performed for the syntactic indices of the charaters to test the Syntactic Hypotheses 3 and 4. The three within-subject independent variables were Story Type (Story 1 vs. Story 2), Syntactic Role (Subject vs. Object), and Consistency (Consistent vs. Inconsistent). The Consistent and the Inconsistent condition were defined in the same way as in the previous analysis of variance, except that the dependent variable was

Tabel 4

Mean Syntactic Indices of *Father* and *Son*

Point of View	*Father* Subject	*Father* Object	*Son* Subject	*Son* Object
Father	6.60	1.20	3.20	2.40
Son	3.40	2.40	4.60	2.00
Original	8.00	0.00	8.00	1.00

Table 5

Mean Syntactic Indices of *Parrot* and *Cat*

	Parrot		*Cat*	
Point of View	Subject	Object	Subject	Object
Parrot	12.40	3.40	7.40	5.60
Cat	9.20	3.20	11.00	2.80
Original	17.00	5.00	14.00	6.00

the syntactic indices of the characters, not the semantic indices of the characters.

The main effects of the three factors were significant: $F(1,9)=251.1$, $p<0.01$ for Story Type; $F(1,9)=57.2$ $p<0.01$ for Syntactic Role; and $F(1,9)=16.6$, $p<0.01$ for Consistency (see Table 6). More importantly, the following two interaction effects were also shown to be significant: $F(1,9)=22.9$, $p<0.01$ for Story Type x Syntactic Role; and $F(1,9)=47.4$ $p<0.01$ for Syntactic Role x Consistency. These interactions can be seen in Figure 2.

Based on the significant interactions, the following can be suggested: the syntactic indices of the target and the non-target characters were significantly reversed between Subject and Object, particularly in Story 2 (see Figure 2). This means that the target character (i.e., Consistent) was much more likely to be treated as the surface subject than as the surface object of a sentence, supporting the Syntactic Hypothesis 3. The Syntactic Hypothesis 4 was also confirmed by the fact that the target character was much more likely to be realized as the surface subject of a sentence than the non-target character (i.e., Inconsistent).

Correlation analysis. In order to test the Correlation Hypothesis, the correlation coefficients were calculated between the semantic indices and the syntactic indices of characters. For this purpose, the two variables were defined as follows: the simple addition of the agent and the

Tabel 6

Results of Analysis of Variance

Source[1]	S. S.	D.F.	M. S.	F Ratio	Significance[2]
S	78.300	9	8.700	–	
A	266.450	1	266.450	251.103	**
AS	9.550	9	1.061	–	
B	16.200	1	16.200	16.568	**
BS	8.800	9	0.978	–	
AB	0.450	1	0.450	0.403	
ABS	10.050	9	1.117	–	
C	378.450	1	378.450	57.196	**
CS	59.550	9	6.617	–	
AC	72.200	1	72.200	22.961	**
ACS	28.300	9	3.144	–	
BC	76.050	1	76.050	47.367	**
BCS	14.450	9	1.606	–	
ABC	3.199	1	3.199	0.723	
ABCS	39.800	9	4.422	–	

[1] S - Subject.
A - Story Type (Story 1 vs. Story 2)
B - Consistency (Consistent vs. Inconsistent).
C - Syntactic Role (Subject vs. Object).

[2] '*' and '**' indicate $p<0.05$ and $p<0.01$, respectively.

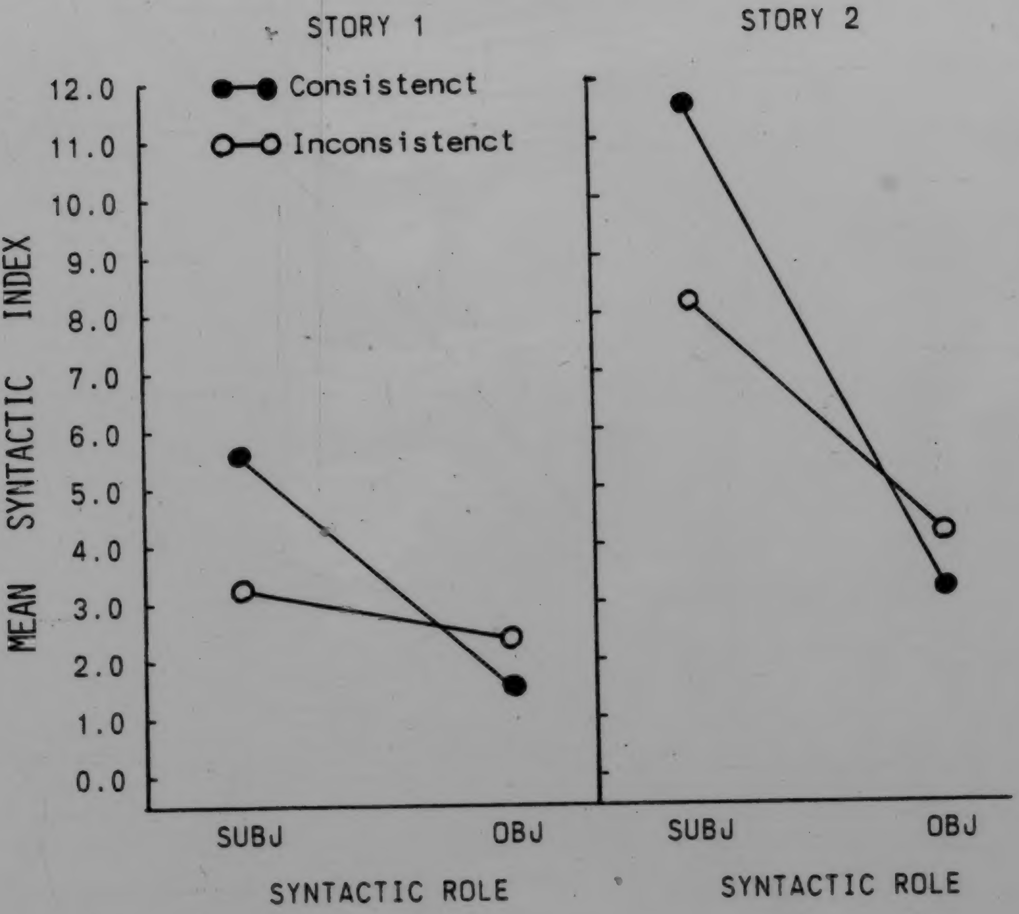

Figure 2. Interaction of Consistency by Syntactic Role for Each Stroy (SUBJ - Subject and OBJ - Object).

experiencer frequency of each semantic index on the one hand, and the subject frequency of each syntactic index on the other.

Since the main effects of Consistency and Story Type were shown to be significant in the previous analyses of variance, it was decided that the correlation coefficients were to be calculated independently for each of the following four cases: the Consistent cases (i.e., F/F and S/S) and the Incosistent cases (i.e., F/S and S/F) in Story 1 and the Consistent Cases (i.e., P/P and C/C) and the Inconsistent cases (i.e., P/C and C/P) in Story 2. For the sake of convenience, these four are referred to as "case 1, 2, 3, and 4," respectively.

The following Pearson correlation coefficients were obtained and shown to be significant, on the basis of the directional tests: $r=0.82$, $df=8$, $p<0.01$ for case 1; $r=0.79$, $df=8$, $p<0.01$ for case 2; $r=0.63$, $df=8$, $p<0.05$ for case 3; and $r=0.84$, $df=8$, $p<0.01$ for case 4. These suggested that in the three cases 1, 2, and 4, more than sixty percent of variability in the variable, the subject frequency of the syntactic index of character, should be attributed to the variability in the other variable, the agent plus the experiencer frequency of the semantic index of character. The rest of the variability in the surface subject of a sentence could be associated with other linguistic and/or nonlinguistic factors, for example, Nominalization, Object-Subject Raising, Extraposition, Equi-Subject

Deletion, etc. in transformational grammar.

3.2.4 Discussion and Conclusions

The results of the propositional and the subject/object analysis clearly confirmed the Propositional Hypotheses 1 and 2 and the Syntactic Hypotheses 3 and 4. Furthermore, it was shown that there was highly significant correlation between the number of times the characters were referred as either the agent or the experiencer of the propositional contents of sentences and the number of times the characters were realized as the surface subjects of sentences.

Therefore, the Primary Effect Hypothesis was clearly confirmed by these experimental facts. That is to say, when the subjects were asked to rephrase the stories from one particular character's point of view, they reorganized the contents of the stories both at the propositional level and at the syntactic level. In such reorganizations, the target character of the point of view tended to be referred to as an agent and/or an experiencer of the propositional level, and then to be realized as a surface subject of the syntactic level.

Therefore, it was concluded that the contextual factor of point of view played a crucial role in planning the propositional contents and/or the surface syntactic subjects of sentences. Put another way, the point of view, as contextually established in discourse, appears to determine whose actions or mental states a narrator has to describe in his on-going experience in the story. In this sense, the discourse notion of point of view can be viewed as an essential linguistic aspect of narrative forms to the extent that narratives or short stories are basically action-oriented discourses.

As stated in Chapter 1, there are certain stylistic aspects of linguistic expressions which can not be accounted for in terms of the Primary Effect Hypothesis. The following are the cases of this sort: 1) If more than one entity, including a target entity of point of view, is referred to as an agent or experiencer, as in the case of symmetric predicates, which is more likely to be a surface subject? 2) If a target character of point of view is referred to as a patient rather than as an agent of an action, will the narrator try to mark the discourse context of point of view by shifting the target NP to the surface subject? 3) If a target character of point of view is referred to as a dative rather than as a agent of a benefactive predicate, will the narrrator try to move the target NP into the surface position immediately after the main verb to mark the discourse context of point of view? Experiments 2 and 3 were designed to find the answers to these questions.

3.3 Experiment 2

3.3.1 Purpose

The purpose of Experiment 2 was to test the Secondary Effect Hypothesis and the Humanness Interaction Effect Hypothesis. As mentioned in a preceding section, it is clear that the surface subject variation of the symmetric predicate and the voice structure and the positional variation of the dative structure are stylistic phenomena which are beyond the Primary Effect Hypothesis. This is because these stylistic variation phenomena are not propositional in nature, but instead syntactic.

In the present study, it was hypothesized as the Secondary Effect Hypothesis that, given alternative positions within the surface structures of sentences, NP's whose referents were the targets of point of view were likely to be moved into the leftmost of the positions. It was also hypothesized as the Humanness Interaction Effect Hypothesis that, if a narrator had more difficulty in identifying himself with animal or thing NP's than human NP's as the targets of point of view, the animal or thing NP's were less likely to be moved into the leftmost positions than the human NP's and, if anti-target NP's were not human but animal or thing NP's, such a positional tendency should be significantly more salient.

3.3.2 Method

Subjects. Twenty-four university students volunteered to take part in Experiment 2. All of the subjects were native speakers of North American English and were taking an introductory linguistics course.

Materials. The task of the subjects was to read short stories without final sentences. They then read three pairs of alternative sentences, one of which was assumed to be a deleted final sentence. After the reading phase, they were asked to choose one member from each pair which they felt to be the more appropriate final sentence.

Nine different stories were constructed, some of which were originally selected from Aesop's fables and then modified for the purpose of Experiment 2. Each story had two main characters, each of whom was either a human, a humanized animal, or a humanized thing.

More importantly, two different versions of each story were constructed: the "motivated" version or story and "unmotivated" version or story. The motivated story consisted of two or three paragraphs, each written in such a way to specifically establish the point of view of one particular character. That is, the subjects were expected to be able to identify relatively easily from whose point of view each paragraph was written, or the narrator's psychological bias towards one character and against the other. The unmotivated stories were composed of only one paragraph in which two points of view of two main characters were combined in a rather random manner. That is, the subjects could not identify from whose point of view the stories were written or from whose point of view the narrator was describing his on-going experience.

In this study, the following criteria for point of view were imposed on each paragraph of the motivated type:

1. The surface subjects of main clauses are the target character of the point of view.
2. The use of psychological predicates such as *think*, *feel*, and so on is restricted to the target character of the point of view.

However, in the one-paragraph unmotivated stories, the surface subjects of the main clauses were alternated between the two main characters and both were the experiencers of psychological predicates. It is also of great importance to note that, as far as Experiments 2 and 3 were concerned, the discourse factor of point of view was operationally defined by these two criteria.

It is helpful to cite as an example the motivated version and the unmotivated version of a story entitled "A RABBIT AND THE WIND":

> *Once upon a time, there was a very proud rabbit. The rabbit always told everybody that he could run faster than anybody else, even the Wind. What is more, the rabbit enjoyed making fun of*

> *other animals.*
>
> *One day, the Wind heard about the rabbit. The Wind got angry about the confidence of the rabbit. The Wind planned to teach the rabbit to behave well in the forest by making fun of him in public. The Wind then sent an invitation card to the rabbit for a race with him.* ______________________________.

The unmotivated version is:

> *A rabbit and the Wind both were confident in running fast. The rabbit always told everybody that he could run faster than anybody else, even the Wind. The Wind got angry with the rabbit for his overconfidence. So they agreed that they would race in front of many animals in the forest. They sent many invitation cards to their many friends.*
>
> ____.

("__" indicates a deleted final sentence.) Note that the narrator takes no particular point of view in the unmotivated version. However, the narrator of the motivated version is clearly taking *rabbit's* point of view in the first paragraph and *the Wind's* in the second. (For the rest of the stories, see Appendix C.)

The stories were immediately followed by three different pairs of alternative sentences. For example, the above motivated version was followed by the following three pairs:

16) The Symmetric Predicate:

a. The rabbit was reconciled with the Wind after the race.

b. The Wind was reconciled with the rabbit after the race.

17) The Voice Structure:

a. The rabbit insulted the Wind before the race.

b. The Wind was insulted by the rabbit before the race.

18) The Dative Structure:

a. The rabbit sent the accepted invitation card to the Wind.

b. The rabbit sent the Wind the accepted invitation card.

Note that these three pairs correspond to the three different syntactic types in question: the symmetric predicate, the voice structure, and the dative structure, respectively, and were designed to test the contextual effects of the point of view on the target character's, *the Wind's*, surface positions in the sentences of the three syntactic types. The target NP occurs in the leftmost of the two alternative positions in (16b-18b), while it is in the rightmost in (16a-18a). In the present study, (16b-18b) are called "marked sentences," and (16a-18a) "unmarked sentences." In the marked sentences, the discourse context of the point of view of *the Wind* is indicated by shifting *the Wind* to the leftmost position. As mentioned in

Chapter 1, *the rabbit* of (16a,b) and (17a,b) and *the accepted invitation card* of (18a,b) are called the "anti-target NP's." It should be noted that the term "marked/unmarked" has nothing to do with the traditional notion of markedness in the linguistics literature, but is designed purely for the sake of convenience.

According to the Secondary Effect Hypothesis, the subjects are expected to choose many more marked sentences under the motivated versions than under the unmotivated. However, the Humanness Interaction Effect Hypothesis predicts that the subjects' preference for the marked sentences over the unmarked sentences should be somewhat reduced (i.e., the reduced contextual effects of point of view), since the target NP, *the Wind*, is lower in a humanness-animacy hierarchy than the anti-target NP, *the rabbit*. If target NP's are higher in the hierarchy than the anti-target NP's, the contextual effects of the point of view should be increased.

In order to test the Humanness Interaction Hypothesis, three human, three humanized animal, and three humanized thing characters were selected as the referents of target NP's; another three human, another three humanized animal, and another three humanized thing characters as the referents of anti-target NP's. Nine pairs of one target and one anti-target NP were then made into the titles of the nine stories. These were simply given on the top of each story in terms of conjoined noun phrases, for example, "A

PARROT AND A WOMAN." The order of the two nouns in each title was randomized.

One point must be made with regard to the anti-target NP's of the dative structure: as could be seen in (18a,b), the anti-target NP's, i.e., direct object NP's, were actually restricted to thing NP's, while the target NP's were exactly the same as the target NP's of two other syntactic types. This was simply because human or humanized direct object NP's were found to cause intolerable semantic anomalies between the pair of alternative sentences and the contents of the stories. Accordingly, the test of the Humanness Interaction Effect Hypothesis was restricted to the significance test of the interaction effects between the contextual effects of point of view and the humanness of target NP's only, with regard to the dative structure.

Another important point to be clarified with these materials is the fact that a target NP and an anti-target NP had to be viewed as being equal candidates for the title of a story, and both of them had to be given information from the viewpoint of discourse context. The purpose of this experimental manipulation was to prevent the subjects from taking into account other kinds of discourse factors, e.g., topic and given-new information, in their choosing one member from each pair. In other words, the subjects were expected to exclude those kinds of contextual factors, and to focus on the discourse factor of point of view.

Procedures. First, two different kinds of booklets were constructed, corresponding to the motivated versions and the unmotivated. The booklets consisted of ten pages, including one instruction page. On each of the nine test pages, one story and its three pairs of alternative sentences were typed. The presentation orders of the nine stories and of their three sentence pairs were randomized.

These experimental booklets were distributed to the 24 subjects. The subjects were not given any specific time or any specific place to do the task, except that they were told to bring the completed booklets back in a couple of days. They were allowed to spend as much time as they wanted.

In the instructions, the following points were emphasized: a) all the characters in the stories were humanized; b) the subjects need not worry that there might be some semantic anomalies between the contents of the stories and the chosen sentences; and c) the subjects had to ignore the two other pairs of sentences, while they were choosing within one particular pair.

3.3.3 Analyses and Results

For the purpose of statistical analyses, the following scoring was carried out for the raw data: "+1" was assigned to a single selection of a marked sentence; "-1" to a single selection of an unmarked sentence. Therefore, each of the three sentence pairs for each story was assigned either +1 or -1. For the sake of convenience, these measurements will hereafter be referred to as "markedness" of which the range is from -1 to +1. (Note that the term "markedness" has nothing to do with the traditional notion of markedness in the linguistics literature.)

Tables 7 and 8 reveal the mean markednesses for the symmetric predicate and the voice structure and for the dative structure, respectively. (For their graphic representations, see Figure 3a,b and Figure 6.)

First, an analysis of variance was performed for the original data of Table 7. The between-subject variable was Discourse Type (Motivated vs. Unmotivated version); the within-subject variables Syntactic Type (Symmetry vs. Voice), Humanness of Target NP (Human, Humanized Animal vs. Humanized Thing), and Humanness of Anti-Target NP. All of these independent variables and subjects were treated as fixed effects. The results of the anaysis of variance are shown in Table 9.

Although, as expected, the mean markedness for the motivated version, 0.037, was larger than the mean markedness for the unmotivated version, -0.231, the difference between the two was not significant: that is, an insignificant main effect of Discourse Type. Neither the main effect of Humanness of Target NP nor the main effect of Humanness of Anti-Target NP was found to be significant. The main effect of Syntactic Type was shown to be significant, $F(1,22)=32.5$, $p<.01$. The mean markednesses for

Table 7

Mean Markedness

Syntactic Type	Target NP	Anti-Target NP	Discourse Type	
			Motivated	Unmotivated
Symmetry	Human	Human	0.500	-0.833
		Animal	0.500	0.667
		Thing	0.667	0.667
	Animal	Human	0.333	0.667
		Animal	0.000	-0.167
		Thing	-0.167	0.500
	Thing	Human	-0.333	-0.333
		Animal	0.167	-0.167
		Thing	0.000	0.333
Voice	Human	Human	0.333	-0.500
		Animal	-0.167	-0.500
		Thing	-0.167	-0.333
	Animal	Human	-0.667	-0.667
		Animal	0.000	-1.000
		Thing	-0.333	-0.833
	Thing	Human	-0.333	-0.667
		Animal	0.333	-0.500
		Thing	0.000	-0.500

Note. -1 ≤ score ≤ +1

Table 8

Mean Markedness

Syntactic Type	Target NP	Anti-Target NP	Discourse Type	
			Motivated	Unmotivated
	Human	Thing	-0.278	0.056
Dative	Animal	Thing	-0.111	0.389
	Thing	Thing	0.167	-0.500

Note. -1 ≤ score ≤ +1

Table 9

Results of Analysis of Variance

Source[1]	S. S.	D.F.	M. S.	F Ratio	Significance[2]
A	7.787	1	7.787	3.191	
S/A	53.685	22	2.440	–	
B	30.083	1	30.083	32.520	**
AB	5.787	1	5.787	6.256	*
BS/A	20.352	22	0.925	–	
C	6.056	2	3.028	2.593	
AC	1.685	2	0.843	0.722	
CS/A	51.370	44	1.168	–	
BC	5.722	2	2.861	3.902	*
ABC	2.463	2	1.231	1.680	
BCS/A	32.259	44	0.733	–	
D	2.880	2	1.444	2.410	
AD	3.185	2	1.593	2.657	
DS/A	26.370	44	0.599	–	
BD	1.556	2	0.778	1.197	
ABD	2.296	2	1.148	1.767	
BDS/A	28.593	44	0.650	–	
CD	5.556	4	1.389	2.154	
ACD	10.593	4	2.648	4.107	**
CDS/A	56.741	88	0.645	–	
BCD	10.556	4	2.639	3.768	**
ABCD	0.704	4	0.176	0.251	
BCDS/A	61.629	88	0.700	–	

---

[1] S - Subject.
A - Discourse Type (Motivated vs. Unmotivated version).
B - Syntactic Type (Symmetry vs. Voice).
C - Humanness of Target NP (Human, Animal, vs. Thing).
D - Humanness of Anti-Target NP (Human, Animal, vs. Thing).

[2] '*' and '**' indicate $p<.05$ and $p<.01$, respectively.

the symmetric predicate and the voice structure were 0.167 and -0.361, respectively. This can be taken to indicate the subjects' basic preference for the active voice over the passive voice.

More importantly, the following interaction effects were found to be significant: Discourse Type X Syntactic Type, $F(1,22)=6.2$, $p<.05$; Syntactic Type X Humanness of Target NP, $F(2,44)=3.9$, $p<.05$; Discourse Type X Humanness of Target NP X Humanness of Anti-Target NP, $F(4,88)=4.1$, $p<.01$; and Syntactic Type X Humanness of Target NP X Humanness of Anti-Target NP, $F(4,88)=3.8$, $p<.01$. These results indicated that the contextual effects of point of view should be discussed in terms of rather complicated interactions with other linguistic and/or non-linguistic factors.

These significant interaction effects can be seen in Figure 3 a,b. On the basis of the significant interactions, the following points could be made:

1. The contextual effects of point of view on the target NP's of the voice structures were much more clearly observed than on the target NP of the symmetric predicates (see Figure 3a,b).
2. With regard to voice, it was found that the contextual effects of point of view were significantly increased in the following pairs of a target and an anti-target NP: human – human, animal – animal, and thing – animal, and they were also significantly decreased in the following pairs: human – thing and animal – human (see Figure 3b).

3. When the target NP's of the voice structure were either humans or humanized things, they were significantly more likely to be the surface subjects of the passive voice, regardless of whether the discourse type was the motivated version or the unmotivated (see Figures 3b and 4).
4. With regard to the symmetric predicate, it was shown that the surface subjects of the symmetric predicates could not necessarily be predicted from the contextual factor of point of view, but rather from the humanness and animacy of the target and anti-target NP's (Figures 3a and 4).
5. It could be seen in Figure 3a and 4 that, as far as human and humanized thing NP's were concerned, the higher target NP's were in the humanness hierarchy, the more likely they were to be the surface subjects of the symmetric predicates; and the lower anti-target NP's in the hierarcy, the more salient such a positional tendency was, regardless of whether the discourse type was the motivated version or the unmotivated version.

Another analysis of variance was performed for the original raw data of Table 8. The between-subject variable was Discourse Type (Motivated version vs. Unmotivated version); and the within-subject variable Humanness of Target NP. The two analyses of variance were performed independently, since the factor Humanness of Anti-Target NP did not have to be treated as an error term or within-cell

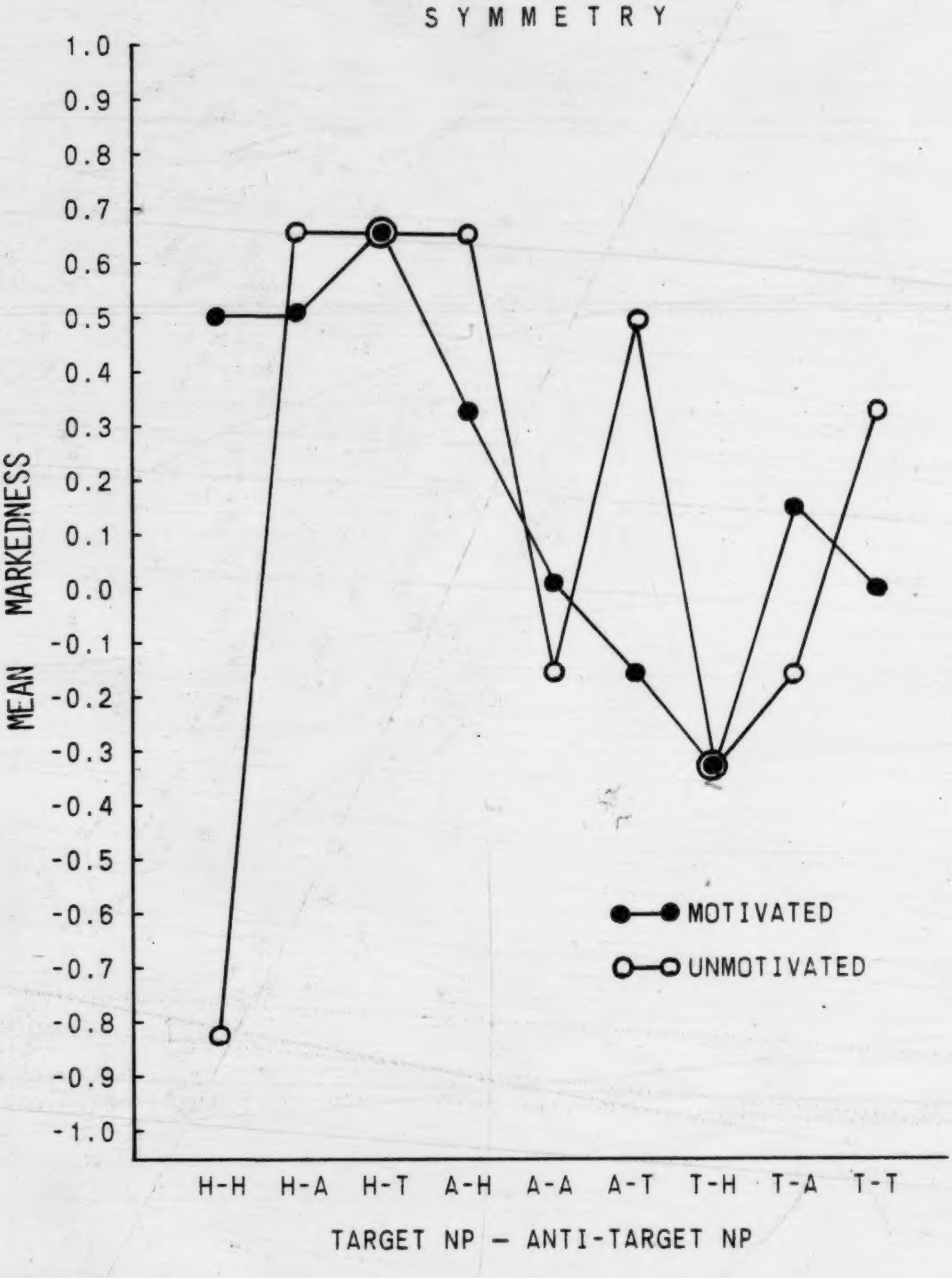

Figure 3a. Mean Markedness for Symmetry (H - Human, A - Animal, and T - Thing).

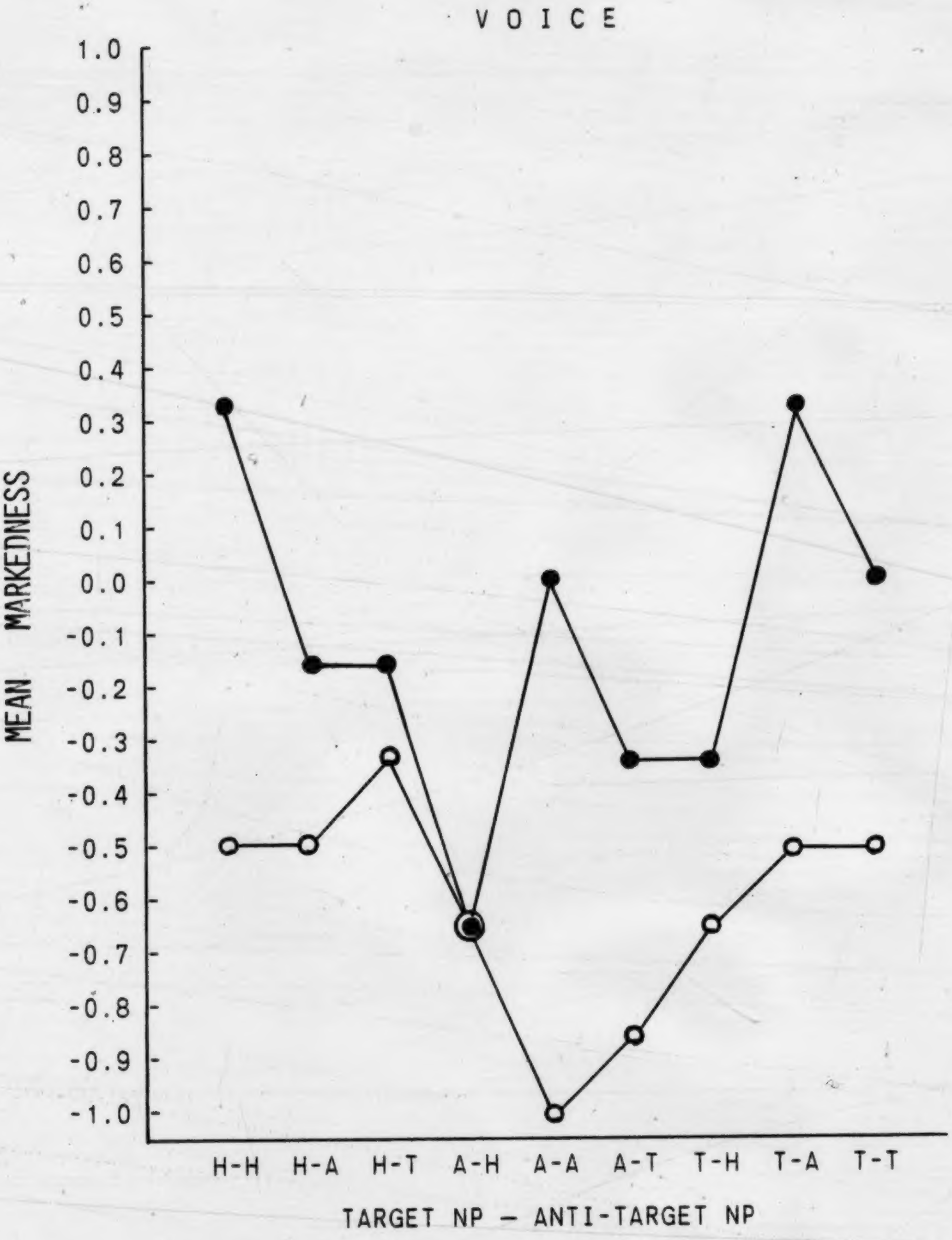

Figure 3b. Mean Markedness for Voice (H - Human, A - Animal, and T - Thing).

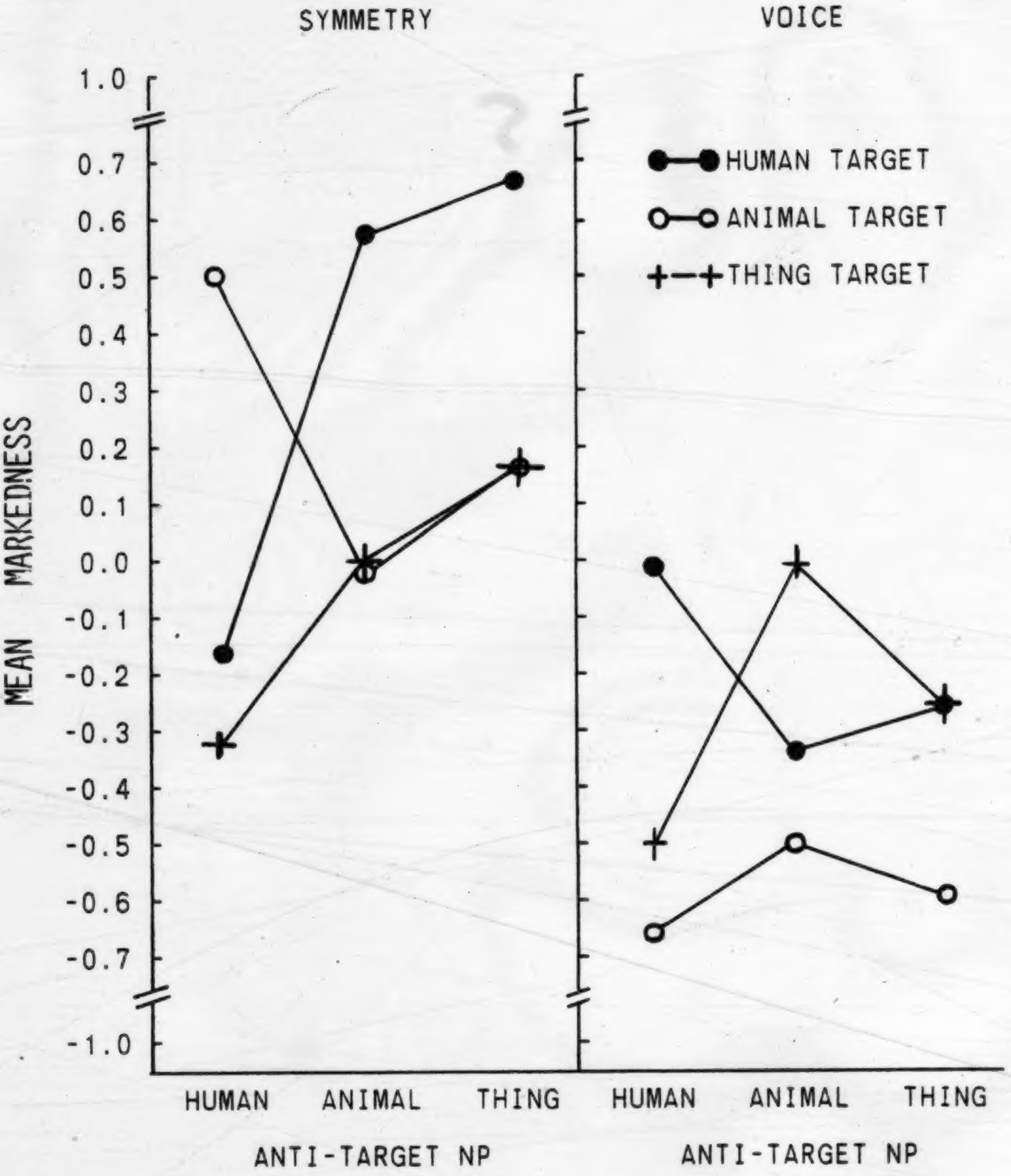

Figure 4. Interaction of Syntactic Type by Humanness of Target NP by Humanness of Anti-Target NP.

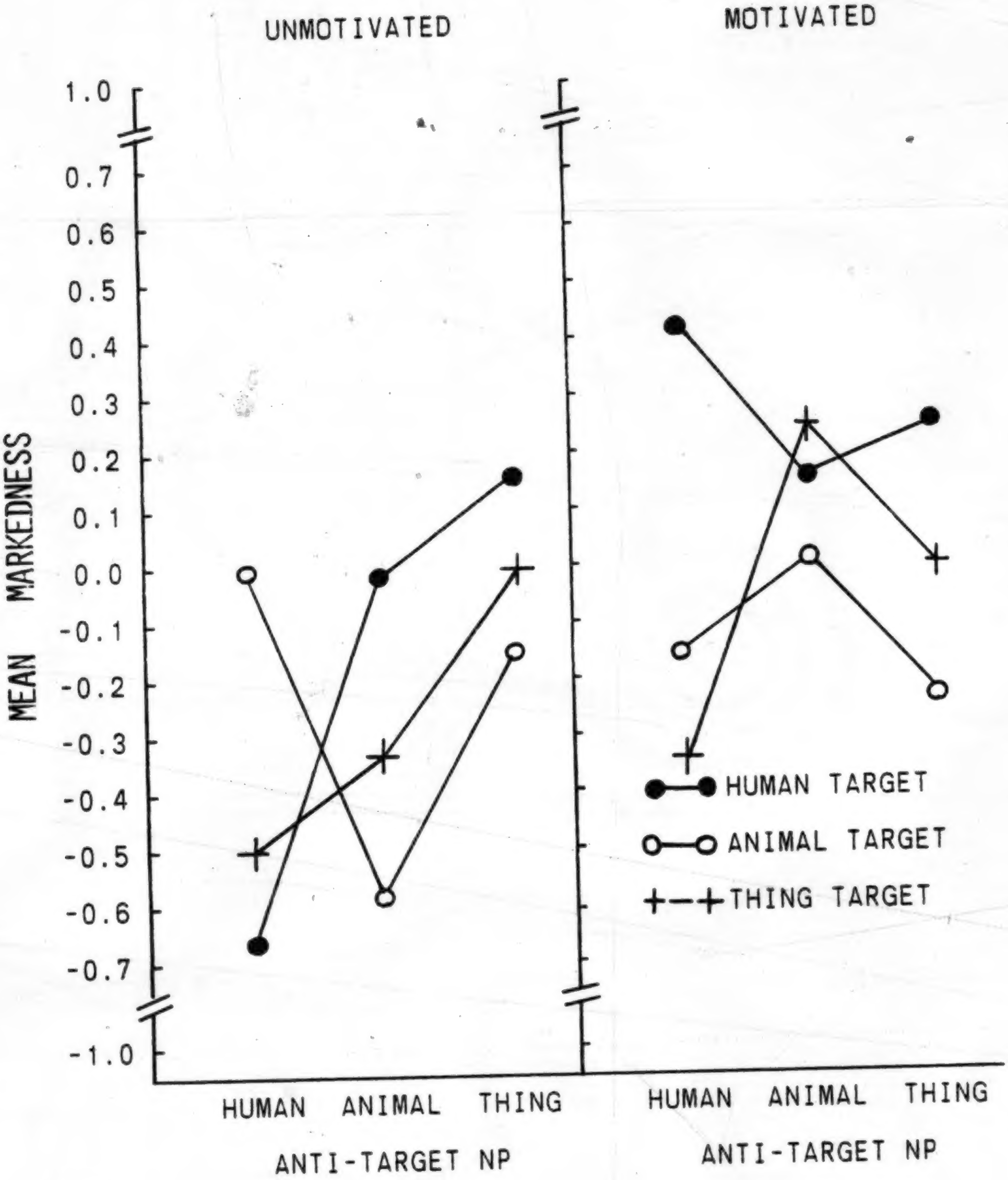

Figure 5. Interaction of Discourse Type by Humanness of Target NP by Humanness of Anti-Target NP.

error. This was because the interaction effects between Humanness of Anti-Target NP and and other factors were shown to be significant. The results of the anaysis of variance is as shown in Table 10.

Contrary to expectations, it was found that the overall mean markedness for the unmotivated version, -0.019, slightly exceeded the overall mean markedness for the motivated version, -0.074. However, the interaction effect between Discourse Type and Humanness of Target NP was shown to be significant, $F(2,44)=7.7$, $p<.01$.

Only humanized thing target NP's were found to be subject to the contextual effects of point of view (see Figure 6). In other words, when dative object NP's were thing target NP's, they were significantly likely to be moved into the surface positions immediately after the main verbs. Human and animal target NP's were shown to be moved into the more rightward positions, i.e., sentence final positions. This is of course totally contrary not only to the Secondary Effect Hypothesis, but also to the Humanness Interaction Effect Hypothesis.

Another interesting difference between the dative structure and the two other syntactic types was that, for the dative structure, there was no positive relationship between the humanness-animacy hierarchy of the target and anti-target NP's and the tendency for the target NP's to be moved into the leftmost surface positions. It was found that the leftward positions of the dative NP's were contrary

Table 10

Results of Analysis of Variance

Source[1]	S. S.	D.F.	M. S.	F Ratio	Significance[2]
A	0.055	1	0.055	0.163	
S/A	7.491	22	0.340	–	
B	1.271	2	0.636	2.027	**
AB	4.777	2	2.389	7.618	**
BS/A	13.796	44	0.314	–	

---

[1] S - Subject.
A - Discourse Type (Motivated vs. Unmotivated Version).
B - Humanness of Target NP (Human, Animal, vs. Thing).

[2] '*' and '**' indicate $p<0.05$ and $p<0.01$, respectively.

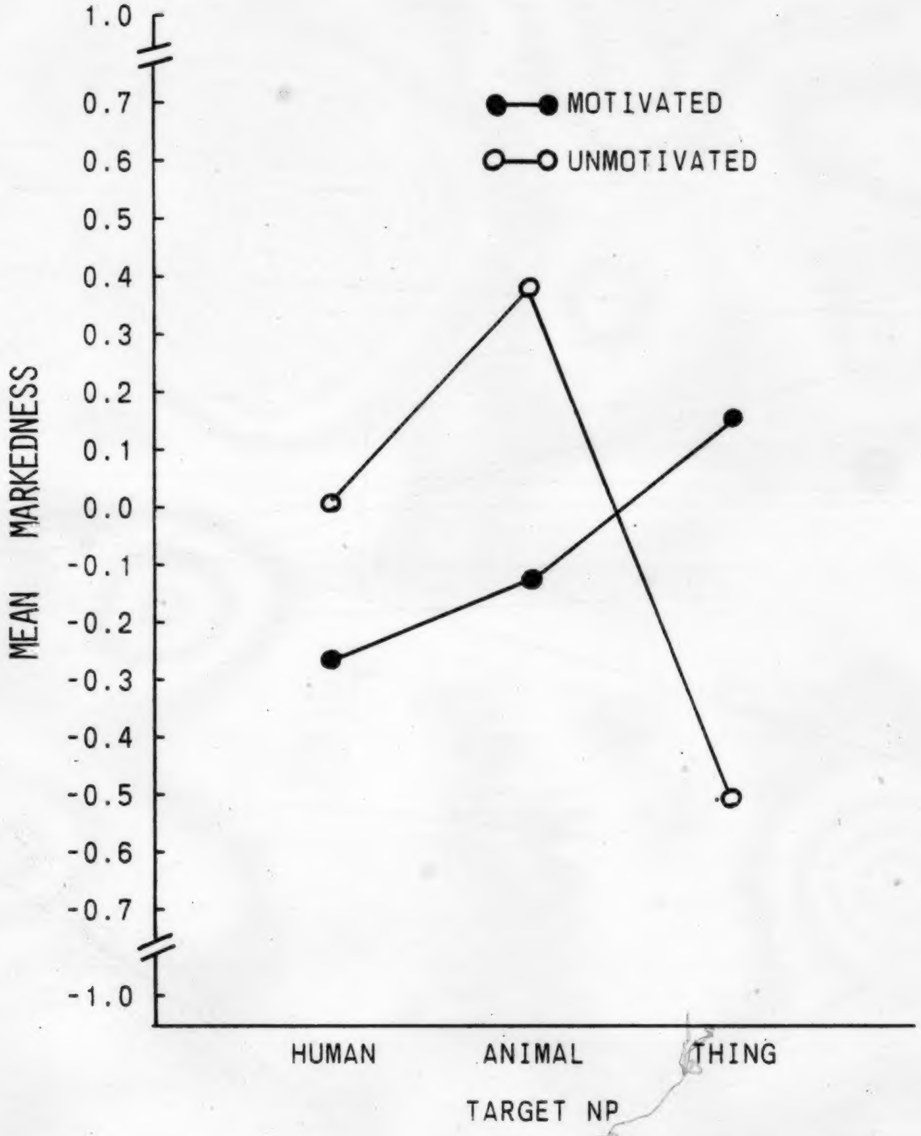

Figure 6. Interaction of Discourse Type by Humanness of Target NP.

to the positive ordinal relationship with the humanness hierarchy of the NP's. (see Figure 6). However, the surface subjects of the symmetric predicates were found to relate to the humanness hierarchy of the target and anti-target NP's rather than to the contextual factor of point of view. The human or humanized thing target NP's of the voice structures were significantly likely to be the surface subjects of the passive voice, regardless of the discourse factor of point of view.

3.3.4 Discussion and Conclusions

Concerning the Secondary Effect Hypothesis, three points could be concluded. First, the choice of the surface subject of the symmetric predicate was a function of the humanness and animacy of the target and anti-target NP's rather than of the contextual factor of point of view. Second, the Secondary Effect Hypothesis was clearly confirmed with regard to the voice structure, even though the magnitude of the mean markednesses for the voice structure was relatively small. Therefore, a discourse function of Passivization could be claimed to mark the discourse context of point of view which was fixed on the referent of the surface subject. Third, with regard to the dative structure, the Secondary Effect Hypothesis was in part confirmed: that is, the contextual effects of point of view were restricted to humanized thing dative NP's.

The Humanness Interaction Effect Hypothesis was not confirmed by the overall results for the symmetric predicate and the voice structure. That is to say, there was no significant relationship between the increases or decreases in the contextual effects of point of view on the surface subjects of the two syntactic types and the humanness hierarchy of the target and anti-target NP's. It was instead suggested that the surface subjects of the two syntactic types were directly related to the humanness hierarchy of the target and anti-target NP's.

In this connection, two points could be concluded. First, the overall results for the symmetric predicate clearly suggested that the higher the target NP's were in the hierarchy than the anti-target NP's, the more likely they were to be the surface subjects. The following humanness hierarchy was suggested: human >> humanized animal > humanized thing, where ">" indicates that the left-hand type is more likley to be the surface subject than the right-hand type. Therefore, it could be concluded that the choice of the surface subjects of the symmetric predicates was a function of the humanness and animacy of the target and anti-target NP's. Second, the overall results for the voice structure suggested the following hierarchy: human ≥ humanized thing >> humanized animal. Taken together, these two suggested that there was a positive ordinal relationship between the subject selection of the symmetric predicates and the passive voice and the humanness hierarchy of the target and anti-target NP's, regardless of the discourse context of point of view.

Thus, it could be concluded that a function of the subject selection of the symmetric predicate was to reflect the humanness and animacy hierarchy of NP's: human >> animal > thing. A function of passivization could be claimed not only to mark the discourse context of point of view, but also to reflect the humanness and animacy hierarchy of NP's: human ≥ thing >> animal.

The overall results for the dative structure could be viewed as being totally contrary to the Humanness Interaction Effect Hypothesis, since only humanized thing target NP's were subject to the contextual effects of point of view, while human or humanized animal target NP's were not. Furthermore, it was suggested that there was a negative ordinal relationship between the leftward movements of the dative NP's and the humanness hierarchy of the dative NP's. That is, the higher the dative target NP's were in the hierarchy, the less likely they were to be moved into the leftmost positions, as far as human and humanized animal dative NP's were concerned.

An interesting distinction could be made between the two syntactic types: the symmetric predicate and the voice structure on the one hand, and the dative structure on the other. This distinction is based on the experimental fact that the surface subjects of the symmetric predicates and the passive voice reflected the positive ordinal relationship with the humanness hierarchy of the NP's, while a negative ordinal relationship was found between the leftward movements of the dative NP's and their humanness hierarchy.

If this distinction can be simply attributed to the syntactic difference between a subject and a dative object, it is consistent with Ertel's (1977) and Zubin's (1979) "egocentric subjects," according to which subject selection is profoundly related to a speaker's egocentric bias, while objects are not. Futhermore, humans and human-related things or objects are likely to be subject to a speaker's egocentric bias and and thus are likely to be the surface subjects of sentences.

A few more interesting phenomena must also be mentioned before a final conclusion on the contextual effects of point of view is drawn. Further experimental research is definitely required, at least with regard to the symmetric predicate and the dative structure. One deals with the interaction between two different kinds of contextual factors: point of view and given-new information. Another should address the interaction between experimental methods (i.e., specific task of subjects) and experimental results. Experiment 3 was designed to investigate these possible interaction phenomena using somewhat different experimental methods.

3.4 Experiment 3

3.4.1 Purpose

The purpose of Experiment 3 was to complement the results of Experiment 2 with a different method and to see how the contextual effects of point of view on the sentential positions of the target NP's interact with another contextual factor of anti-target NP's, i.e., given-new information. Hereafter, this factor is referred to as "Anaphora of Anti-Target NP."

It was hypothesized as the Positive Additive Effect Hypothesis that, if anti-target NP's were not anaphoric from the viewpoint of discourse context, the contextual effects of point of view on the sentential positions of the target NP's should be increased significantly. Put another way, it should be more probable that target NP's occur in the leftmost positions within the surface structures as additional effects of two different kinds of contextual factors of the target and anti-target NP's: the target NP's are the targets of the point of view and the anti-target NP's are new information. It is also of great interest to see how these additional effects on the sentential positions of target NP's interact with other factors, namely Syntactic Type, Humanness of Target NP, and Humanness of Anti-Target NP.

3.4.2 Method

Subjects. Ten subjects volunteered to participate in Experiment 3. The subjects were either undergraduate or graduate students at University of Alberta, and all were native speakers of North American English.

Materials. The nine motivated stories of Experiment 2 were used in Experiment 3 (see Appendix C). Ten-page booklets were constructed, including one instruction page. Since Discourse Type (the motivated version and unmotivated version) was not an independent variable in Experiment 3, the unmotivated stories were not used.

There were two main differences between Experiments 2 and 3. First, each motivated story in Experiment 3 was followed by three different sets of four alternative sentences, one of which was assumed to be the final sentence of the story. Second, the subjects' task in Experiment 3 was not to choose one member from among the four of each set, but instead to make intuitive judgments of the fitness of the four alternatives of each set as the final sentence. As the fitness measure, a 7-point scale was designed in which "7" indicated "the best fit of the four" and "1" "the worst fit."

It is helpful to take for example a motivated story, "A RABBIT AND THE WIND," described in section 3.3.2, of which the target character was *the Wind*. The story was followed by the following three sets of four alternative sentences:

19) The Symmetric Predicate:

a. The Wind was reconciled with the rabbit after the race.

b. The rabbit was reconciled with the Wind after the race.

c. The Wind was reconciled with the rabbit's supporters after the race.

d. The rabbit's supporters were reconciled with the Wind after the race.

20) The Voice Structure:

a. The Wind was insulted by the rabbit before the race.

b. The rabbit insulted the Wind before the race.

c. The Wind was insulted by the rabbit's supporters before the race.

d. The rabbit's supporters insulted the Wind before the race.

21) The Dative Structure:

a. The rabbit sent the Wind the accepted invitation card.

b. The rabbit sent the accepted invitation card to the Wind.

c. The rabbit sent the Wind a message.

d. The rabbit sent a message to the Wind.

The anti-target NP's of (19c,d) and (20c,d) and (21c,d), *the rabbit's supporters* and *a message*, respectively, are not anaphoric (i.e., they are new information), whether the criterion is Chafe's (1976) or Halliday's (1970). However, the anti-target NP's of (19a,b) and (20a,b) and (21a,b), *the rabbit* and *the accepted invitation card*, are anaphoric (i.e., they are given information). For the sake of convenience, (19a-21a) are, hereafter, called "marked sentence of type 1"; (19b-21b) "unmarked sentence of type 1"; (19c-21c) "marked sentence of type 2"; and (19d-21d)"unmarked sentence of type 2." The marked and unmarked sentences of type 1 are exactly the same as the marked and unmarked sentences of Experiment 2. (It should be noted that the term "marked/unmarked" has nothing to do with the traditional notion of markedness in linguistics literature.) The above three sets of four alternatives correspond to the three syntactic types in question: the symmetric predicate, the voice structure, and the dative structure, respectively. The presentation orders of the three sets and the four alternatives of each set were randomized.

According to the Positive Additive Effect Hypothesis, the differences between the judged fitness of marked sentences and unmarked sentences of type 2 should significantly exceed the differences between the judged fitness of marked sentences and unmarked sentences of type 1. This is because, as exemplified above, the anti-target NP's of marked sentences of type 2 are neither the target of the point of view nor anaphoric information. In other words, the tendency for the target NP's to be moved into leftmost positions should be facilitated by another tendency, called "Given-New Strategy," for the non-anaphoric anti-target NP's to be moved into the rightward positions.

Procedures. The ten-page booklets were individually distributed to the ten subjects. The subjects were not given any specific time or place to do the experimental task, except that they were told to bring the completed booklets back in a couple of days.

As to the stories, the following points were emphasized in the written instruction: a) all the characters in the stories were humanized, regardless of whether they are animals (or birds) or things; and b) the subjects were not to worry that there might be some semantic anomalies between the content of each story and the four alternatives of each set.

Since the task was for the subjects to make their intuitive judgements of the fitness of the four alternatives as the final sentence, they were instructed to be familiar with the following 7-point scale before starting the task:

7 -- the best fit
6 -- a better fit, but not as good as 7
5 -- a good fit, but not as good as 6
4 -- uncertain as to the fitness,
exactly in between 7 and 1
3 -- a bad fit, but not as bad as 2
2 -- a worse fit, but not as bad as 1
1 -- the worst fit

The subjects were also instructed to follow the following steps:

1. Read the story.
2. Read the four sentences of the first set.
3. Choose the *best* and the *worst* final sentence from among the four and assign *7 and 1 to them, respectively*.
4. Compare two other remaining sentences with the best and the worst and then assign the fitness measures *(6, 5, 4, 3, or 2)* to them.
5. Go on to the next set of sentences and repeat the 2nd, 3rd, and 4th procedure. You may also reread the story if you need to.

Furthermore, the subjects were told to ignore the other two sets of sentences, while they were making the fitness judgements of the four alternatives of one particular set.

The motivation for this experimental method stemmed from the fact that the focus of Experiment 3 was not on the choice of the best final sentence from among the four, but instead on the numerical differences between the judged fitness of marked and unmarked sentences of type 1 and between the judged fitness of marked and unmarked sentences of type 2. The range of such numerical differences was from -6 to +6.

3.4.3 Analyses and Results

First, it is neccessary to explain how the numerical differences between the judged fitness of marked and unmarked sentences were calculated. The numerical difference was simply defined by the following subtraction formulas: (the judged fitness of a marked sentence of type 1 minus the judged fitness of an unmarked sentence of type 1), (the judged fitness of a marked sentence of type 2 minus the judged fitness of an unmarked sentence of type 2). Taking for example (19a-d), the former difference is (19a)-(19b); and the latter (19c)-(19d). These two numerical differences were then calculated for each of the three sets of each story. Hereafter, the numerical difference is referred to as "markedness difference." (Note that the term "markedness" is designed purely for the sake of convenience.)

Tables 11 and 12 reveal the mean markedness differences for two syntactic types: the symmetric predicate and the voice structure, and for the dative structure, respectively. The graphic representation of Table 11 is as shown in Figure 7. Plus signs and minus signs indicate the subjects' preference for marked sentences and for unmarked sentences, respectively. The Positive Additive Effect Hypothesis predicts that the markedness differences for non-anaphoric anti-target NP's should be larger than those for anaphoric anti-target NP's.

Table 11

Mean Markedness Difference For Symmetry and Voice

Syntactic Type	Target NP	Anti- Target NP Human	Animal	Thing
Anaphoric Anti-Target NP				
Symmetry	Human	1.5	3.5	1.1
	Animal	-1.0	0.6	-2.1
	Thing	-0.9	0.2	0.3
Voice	Human	-0.2	-0.7	-0.7
	Animal	-1.6	-0.8	0.0
	Thing	-0.9	-1.3	-1.1
Non-Anaphoric Anti-Target NP				
Symmetry	Human	2.7	2.2	1.2
	Animal	0.1	0.8	0.5
	Thing	0.0	-0.5	0.9
Voice	Human	1.4	0.3	-0.5
	Animal	-0.7	0.0	0.1
	Thing	0.2	-0.8	-1.1

Note, $-6 \leq \text{score} \leq +6$

Table 12

Mean Markedness Difference for Dative

Syntactic	Target	Anti-	Target	NP
Type	NP	Thing	Thing	Thing
		Anaphric Anti-Target NP		
Dative	Human	-0.6	0.2	-1.2
	Animal	-0.5	0.5	-1.0
	Thing	0.6	-0.7	-0.9
		Non-Anaphoric Anti-Target NP		
Dative	Human	0.1	1.9	0.3
	Animal	0.1	1.0	-0.5
	Thing	0.8	-0.8	0.4

Note. $-6.0 \leq \text{score} \leq +6.0$

An analysis of variance was performed for the original raw data of Table 11. The within-subject variables were Syntactic Type (Symmetry vs. Voice), Humanness of Target NP (Human, Animal, vs. Thing), Anaphora of Anti-Target NP (Anaphoric vs. Non-Anaphoric) and Humanness of Anti-Target NP. All the variables and subjects were treated as fixed effects. The results of the analysis of variance are as shown in Table 13.

Three main effects of Syntactic Type, Humanness of Target NP, and Anaphora of Anti-Target NP were shown to be significant: $F(1,9)=6.2$, $p<.05$; $F(2,18)=6.1$, $p<.01$; and $F(1,9)=7.7$, $p<.05$, respectively. These facts suggest the following three points:

1. As expected from the results of Experiment 2, the subjects tended to prefer the active voice to the passive voice. The overall mean markedness differences for the symmetric predicate and the voice structure were 0.611 and -0.472, respectively.
2. Human target NP's were more likely to be moved to the surface subject positions than animal or thing target NP's. The overall mean markedness differences for the three were 0.983, -0.350, and -0.425, respectively.
3. As expected, non-anaphoric anti-target NP's were more likely to be moved into rightward surface positions than anaphoric anti-target NP's. The overall mean markedness differences for non-anaphoric and anaphoric anti-target NP's were 0.378 and -0.239, respectively.

Table 13

Results of Analysis of Variance

Source[1]	S. S.	D.F.	M. S.	F Ratio	Significanc[2]
S	89.292	9	9.921	–	
A	105.625	1	105.625	6.229	*
AS	152.625	9	16.958	–	
B	150.672	2	75.336	6.102	**
BS	222.216	18	12.345	–	
AB	50.017	2	25.008	7.505	**
ABS	59.984	18	3.332	–	
C	34.225	1	34.225	7.717	*
CS	39.914	9	4.435	–	
AC	0.625	1	0.450	0.450	
ACS	12.513	9	1.390	–	
BC	5.550	2	2.775	0.766	
BCS	65.228	18	3.624	–	
ABC	9.650	2	4.825	2.258	
ABCS	38.461	18	2.137	–	
D	9.739	2	4.869	0.531	
DS	165.150	18	9.175	–	
AD	17.616	2	8.808	1.710	
ADS	92.716	18	5.151	–	
BD	39.978	4	9.994	1.366	
BDS	263.467	36	7.319	–	
ABD	35.467	4	8.867	1.369	
ABDS	233.200	36	6.478	–	
CD	16.550	2	8.275	2.781	
CDS	53.560	18	2.976	–	
ACD	21.650	2	10.825	4.625	*
ACDS	42.128	18	2.340	–	
BCD	7.000	4	1.750	1.896	
BCDS	33.223	36	0.923	–	
ABCD	3.200	4	0.800	0.262	
ABCDS	110.021	36	3.056	–	

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[1] S - Subject.
A - Syntactic Type (Symmetry vs. Voice).
B - Humanness of Target NP (Human, Animal, vs. Thing).
C - Anaphora of Anti-Target NP (Anaphoric vs. Nonanaphoric).
D - Humanness of Anti-Target NP (Human, Animal, vs. Thing).

[2] '*' and '**' indicate $p<0.05$ and $p<0.01$, respectively.

More importantly, the following interaction effects were also found to be significant: Syntactic Type X Humanness of Target NP, *F*(2,18)=7.5, *p*<.01 and Syntactic Type X Anaphora of Anti-Target NP X Humanness of Anti-Target NP, *F*(2,18)=4.6, *p*<.05. These significant interaction effects are as shown in Figures 7, 8, and 9.

These significant interaction effects could be summarized on the following points:

1. The main effects of Anaphora of Anti-Target NP's could be much more clearly observed in the case of the voice structure than in the case of the symmetric predicate, except that, when the anti-target NP's of the voice structures were humanized things, such effects were reduced to zero (see Figures 7 and 9).
2. The effects of Anaphora of Anti-Target NP was found to be rather complicated in the case of the symmetric predicate. For example, when the anti-target NP's were humanized animals, such additional effects were contrary to expectations, namely, not positive but negative effects of shifting the target NP's into rightward positions. However, such anaphoric additional effects could clearly be observed, when the target NP's were humanized animals (see Figures 7, 8, and 9).
3. When the target NP's of the symmetric predicates were humans, they were much more likely to be the surface subjects, regardless of whether the anti-target NP's were humans, animals, or things and whether the

anti-target NP's were anaphoric or not (see Figure 8).

4. The humanness-animacy hierarchy was found to be borne out, with regard to the voice structure as well as the symmetric predicate, in which human NP's and animal NP's were more likely to be the surface subjects of the sentences than animal NP's and thing NP's, respectively. This also held, regardless of whether the anti-target NP's were anaphoric or not (see Figure 8).

Another analysis of variance was performed for the original raw data of Table 12. The within-subject variables were Humanness of Target NP and Anaphora of Anti-Target NP. Both variables and subjects were treated as fixed effects. The results of the analysis of variance are revealed in Table 14.

As expected, the main effect of Anaphora of Target NP was found to be significant, $F(1,9)=7.6$, $p<.05$. This main effect could then be interpreted in a rather straightforward manner, since the interaction effect between the two variables was not found to be significant (see Figure 10). That is to say, the non-anaphoric anti-target NP's caused purely additional effects of moving the target NP's into the leftmost positions. The overall mean markedness differences for anaphoric and non-anaphoric anti-target NP's were -0.411 and 0.367, respectively.

It was also shown that the surface positions of dative target NP's were not subject to the humanness hierarchy of the NP's in a signifcant fashion. The overall mean

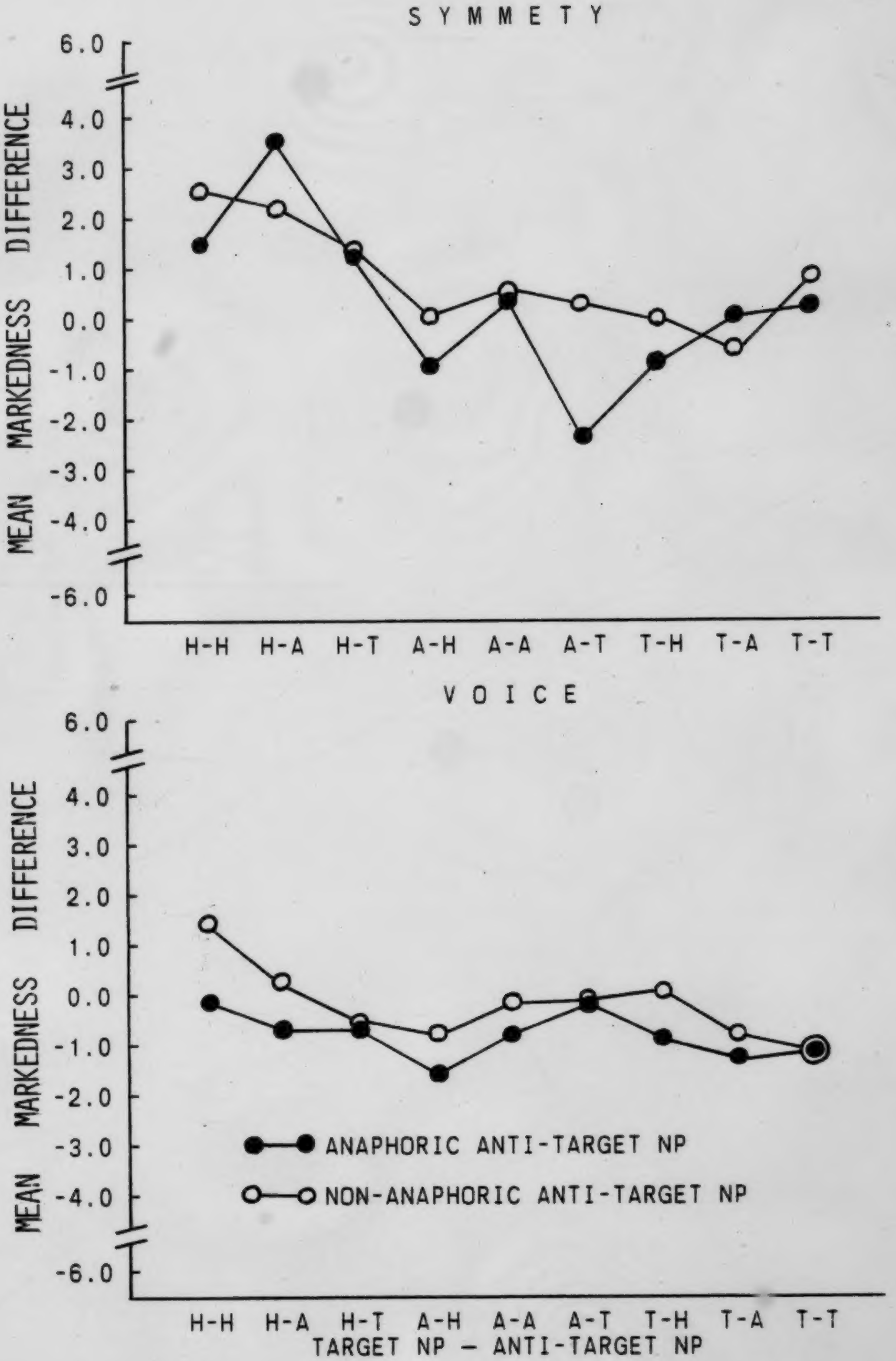

Figure 7. Mean Markedness Difference (H - Human, A - Animal, and T - Thing)

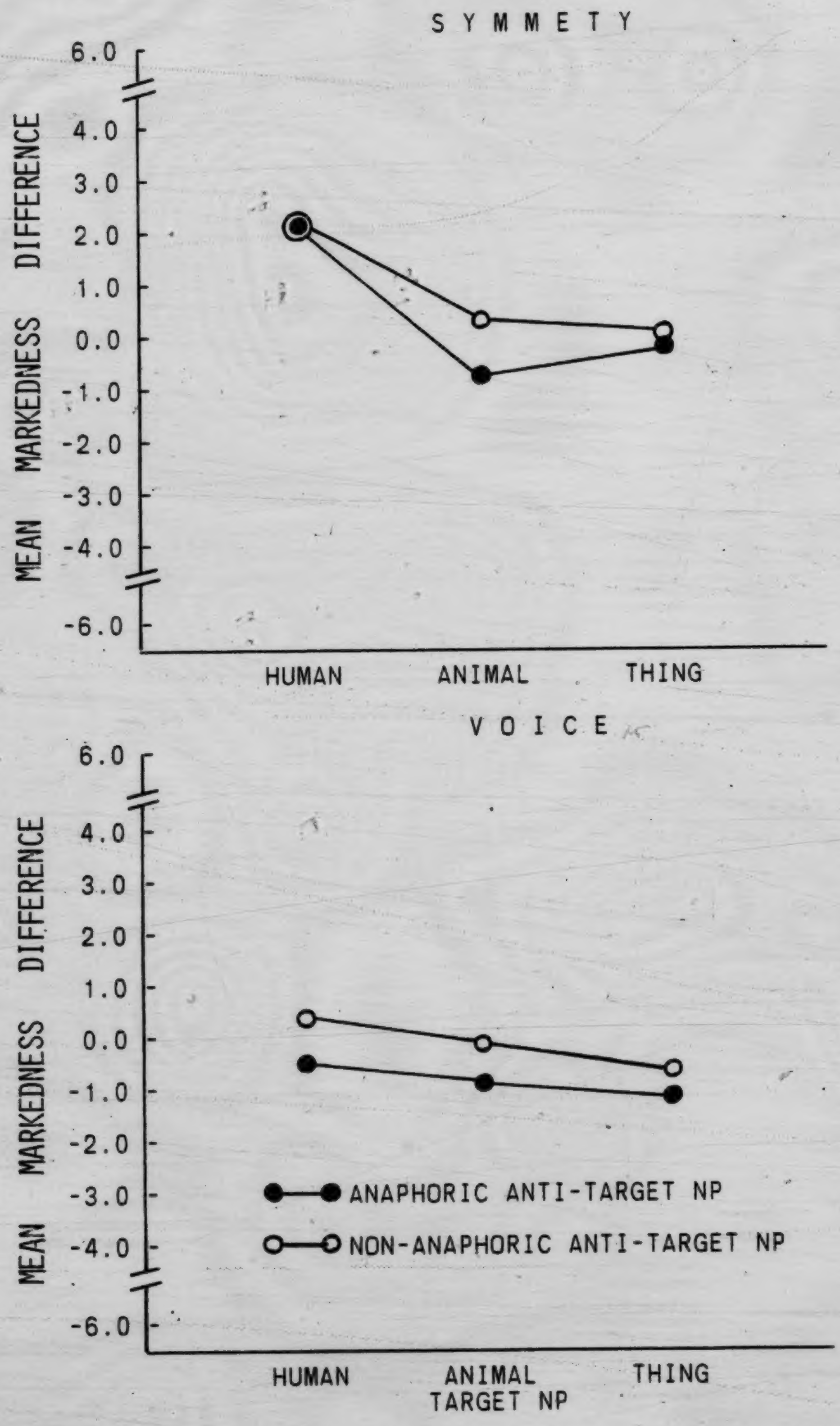

Figure 8. Interaction of Syntactic Type by Humanness of Target NP for Anaphoric and Non-anaphoric Anti-target NP.

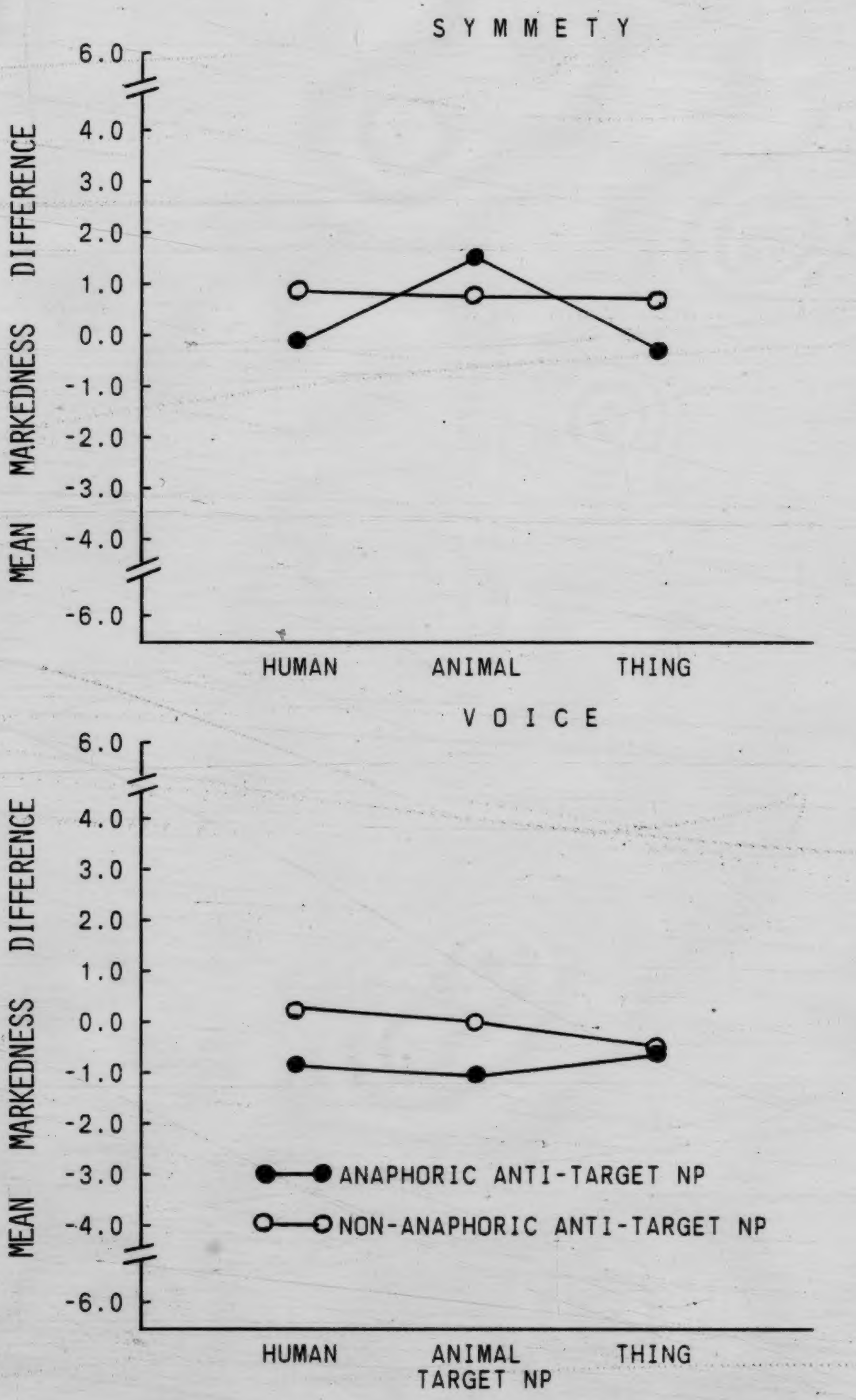

Figure 9. Interaction of Syntactic Type by Humanness of Anti-target NP by Anaphora of Anti-Target NP.

Table 14

Results of Analysis of Variance

Source[1]	S. S	D.F.	M. S.	F Ratio	Significance[2]
S	91.337	9	10.149	–	
A	0.604	2	0.302	0.233	
AS	23.357	18	1.298	–	
B	9.073	1	9.073	7.551	*
BS	10.813	9	1.201	–	
AB	2.048	2	1.024	1.163	
ABS	15.840	18	0.880	–	

[1] S - Subject.
A - Humanness of target NP (Human, Animal, and Thing).
B - Anaphora of Anti-Target NP (Anaphoric and Nonanaphoric).

[2] '*' and '**' indicate $p<0.05$ and $p<0.01$, respectively.

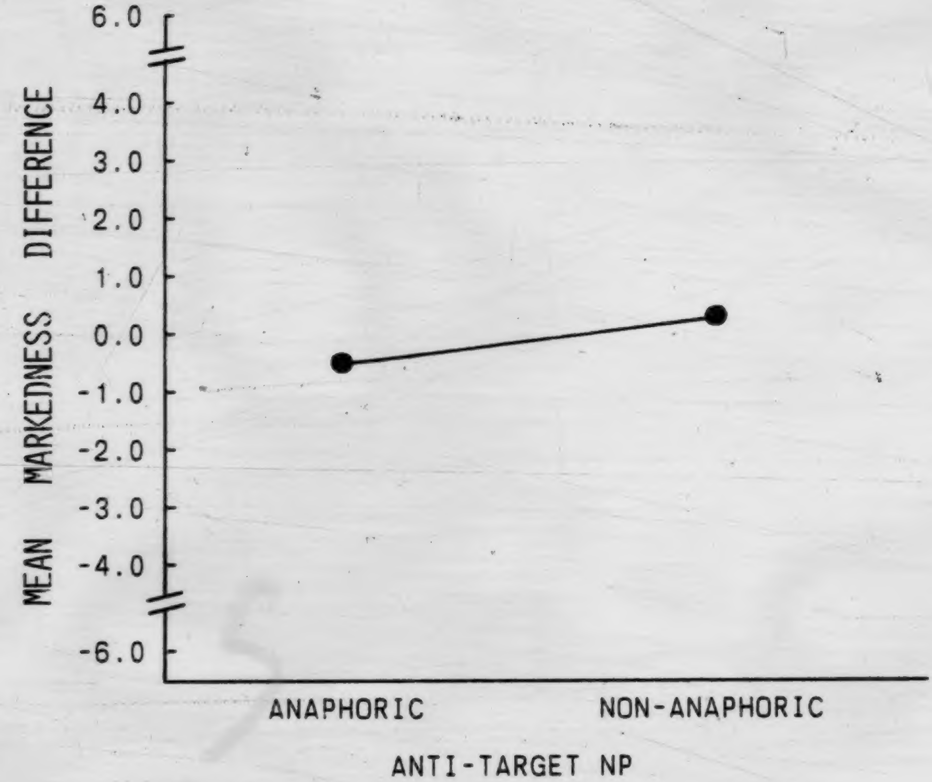

Figure 10. A Main Effect Graph of Anaphora of Anti-Target NP.

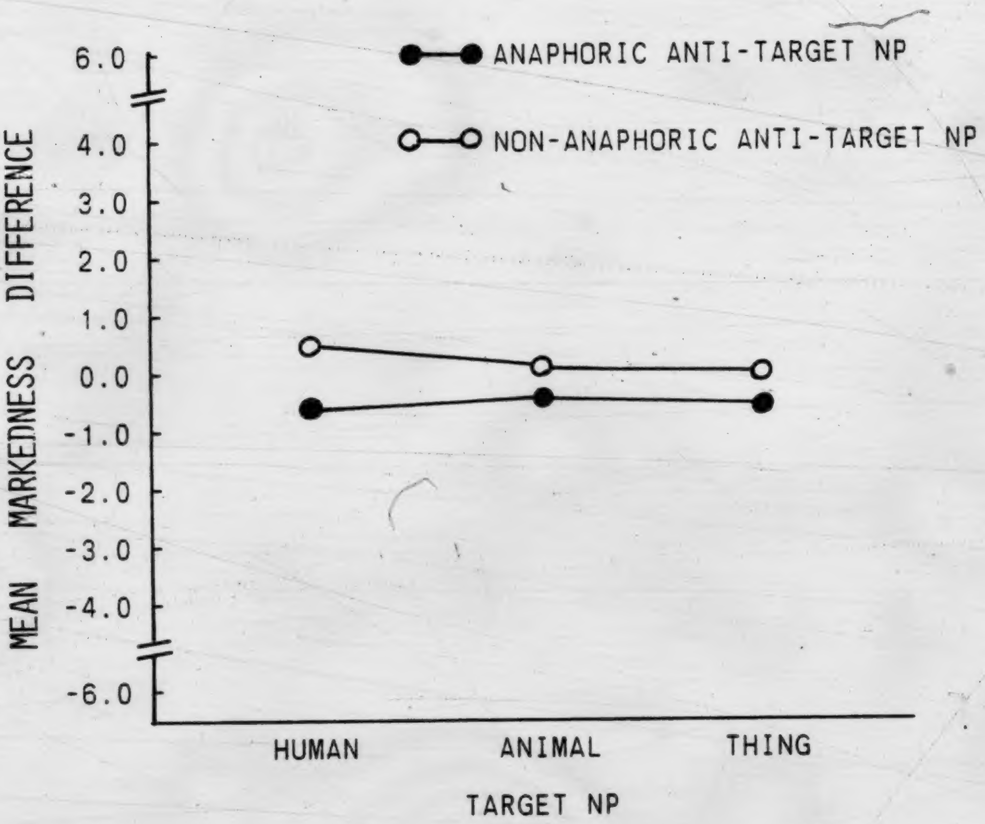

Figure 11. Interaction of Humanness of Target NP by Anaphora of Anti-Target NP (not significant).

markedness differences for the human, animal, and thing target NP's were 0.117, -0.067, and -0.117, respectively. A Newman-Keuls test indicated no significant difference among these three means, although the magnitudes of these three were consistent with the humanness and animacy hierarchy.

3.4.4 Discussion and Conclusions

The overall results of Experiment 3 clearly confirmed the Positive Additive Effect Hypothesis. That is, if anti-target NP's are not anaphoric and target NP's are, the tendency for the target NP's to be placed in the leftmost surface positions is, to a significant extent, facilitated. As a consequence of interaction effects, such additional contexutal effects were not necessarily in agreement with the hypothesis in a couple of pairs of a target NP and an anti-target NP (see Figures 7, 8, and 9). However, these inconsistent cases could not be viewed as devaluing the general conclusion. It could, therefore, be concluded that the surface subjects of the symmetric predicate and the voice structure were clearly subject to the contextual effects of given-new information; namely, given information should precede new information.

However, it was also shown that such a discourse function of the symmetric predicate was still questionable, compared with that of Passivization. This was because, as could be seen in Figure 7, the additional contextual effects of shifting target NP's to the leftmost positions were less clearly observed with regard to the symmetric predicate than with regard to the voice structure. Figure 8 suggests that the humanness of target NP's should be a major determinant of the surface subject of the symmetric predicate rather than contextual factors. In fact, Experiment 2 indicated that the choice of the surface subject of the symmetic predicate had to do with the humanness and animacy of the target and anti-target NP's rather than the contextual factor of point of view.

Taken together, the results of Experiments 2 and 3 suggested the following with regard to the symmetric predicate: the surface subject of the symmetric predicate did not relate to the contextual factor of point of view in a systematic and significant manner, but rather to the contextual factor of the given-new information. In addition, the surface subjects of the symmetric predicates were directly related to the humanness and animacy hierarchy of NP's.

With regard to voice, it could be concluded that the discourse function of Passivization involved at least two different contextual factors: point of view and given-new information. The contextual effects of the two on the surface subject of the passive voice were simply additive, not interactive. Furthemore, the surface subjects of the passive structures involved the humanness and animacy of NP's, but the ordinal relationship between the two was not as significant as the ordinal relationship between the surface subjects of the symmetic predicates and the humanness hierarchy of NP's.

As far as the dative structure was concerned, the results of Experiment 2 and 3 were rather inconsistent in a sense. In Experiment 2, only the thing target NP's were subject to the contextual factor of point of view. In addition, there was a negative relationship between the leftward positions of the target NP's and the humanness hierarchy of the target NP's.

However, the results of Experiment 3 suggested that the surface positions of dative target NP's could be predicted from the contextual factor of the given-new distinction, regardless of whether they were human, animal, or thing NP's. That is, when the anti-target NP's were not anaphoric, the tendency for the target NP's to be placed in the leftmost position was significantly facilitated in a straightforward fashion.

These two results strongly suggested that, in general, dative positions are not subject to the contextual factor of point of view, but rather to the givenness of the dative and direct object NP's. Moreover, there was no ordinal relationship between the leftward positions of dative NP's and the humanness hierarchy of the dative NP's. It was also shown that, when the anti-target NP's were anaphoric (i.e., given information), the human target NP's were likely to be in the final positions of the sentences. This was found in both of Experiments 2 and 3. It is by the positive and the negative relationship with the humanness of NP's that the distinction between the two syntactic types: the symmetric predicate and the voice structure and the dative structure could be drawn.

4. GENERAL DISCUSSION AND CONCLUSIONS

The Primary Effect Hypothesis was clearly confirmed in Experiment 1. It was shown in the rephrase task that, when the subjects were asked to rephrase two stories, written from a neutral point of view, from one particular character's point of view, or with a psychological bias towards that character, they significantly tended to refer to that character as an agent and/or an experiencer of the propositional content of a sentence. They also tended to represent these agents and/or experiencers as the surface grammatical subjects of the sentences. In other words, the associations between the given points of view for the rephrase task and the resulting semantic indices of characters, and between the given points of view and the resulting syntactic indices of characters, were highly significant.

An attempt was made to keep subjects from taking into account other possible contextual factors such as "topic" and "a main or minor character." Thus it can be argued that the differences in the semantic and syntactic indices of characters must be attributed to the differences in the given points of view, namely, subjects' psychological bias towards one character and against the other.

From this evidence, it can be concluded that the discourse notion of point of view is no doubt psychologically salient in the organization or planning of sentences. Furthermore, the semantic cases of agent and experiencer are associated with the contextual factor of point of view. Like other discourse notions such as topic and subject, the discourse notion of point of view is no doubt one possible explanation of the stylistic variation of the propositional contents of sentences in question (see Chapter 1). Put another way, the point of view established in discourse context is an indication of whose actions or mental states the narrator has to describe in his on-going experience or which he has to choose, among the alternative propositional contents of sentences.

The discourse notion of point of view can then be considered an essential aspect of text to the extent that a narrative or a short story is basically action-oriented (Marckworth & Baker, 1979; van Dijk, 1979) For example, van Dijk stated:

> A narrative, both natural and artifical, is a specific type of *action discourse*. An action discourse is a discourse which contains action descriptions. An action description is a sequence of propositions denoting actions or component properties, caused reasons and consequences, of actions. An action is a state change (in some possible world or 'situation') brought about, intentionally, by a conscious human being (a 'person'). This implies that a (simple) action is an ordered pair of some mental state or event, e.g. an intention and/or purpose, on the one hand, and a bodily movement, or 'doing', on the other hand. (p. 61)

The results of Experiment 1 suggest that it is on the basis of a narrator's point of view or psychological bias that he can decide on how to build up such a "sequence of propositions denoting actions ..." In other words, the narrator's point of view or psychological bias establishes who is more likely to be an agent or an experiencer of an action or a mental state, respectively, in planning the propositional contents of sentences.

This is also consistent with Chafe's (1979) "principle of coherence," according to which a narrator, for the most part, organizes several conceptual foci of a phrase level into an idea unit of a sentence level with regard to certain interests in particular persons, objects, or things. An action or a mental state seems to be exactly what is meant by a speaker's "certain interests in or psychological bias towards" the persons, objects, or things.

It was also shown that the subjects reorganized the propositional contents of stories not only with regard to a schematic plot or a story grammar, but also with regard to the points of view of the characters in the stories. It has recently been pointed out that the understanding, summarizing, and recalling of the propositional contents of stories can be predicted by the story grammar or biased by schematic knowledge, namely hierarchically interrelated categories such as *setting, episode, state, event, reaction*, and so on (e.g., Kintsch & Dijk, 1978; Rumelhart, 1975, 1977; Schank & Abelson 1977; Thorndyke, 1977).

Van Dijk (1977 a) and Kintsch and van Dijk (1978) identified three typical macro-operations, "generation," "deletion," and "construction," by which the content of a story, a set of micro-propositions, is filtered as a short summary of the story. For example, given the following part of a story: "... Mother was cleaning the kitchen. Father was typing his new book. The children were painting the doghouse...," one may produce the following micro-propositions: (CLEAN MOTHER KITCHEN), (TYPE FATHER (NEW BOOK)), and (PAINT CHILDREN DOGHOUSE). These four micro-propositions are likely to be substituted for by only one macro-proposition: (WORK WHOLE-FAMILY) = *The whole family are working or busy working* in summarizing or recalling the story. This is precisely a filtering function of the macro-operation construction.

However, it is obvious that this kind of propositional reorganization can not account for the stylistic variation of the propositional contents of sentences in question (see (1-2 a,b)). Experiment 1 suggests that there is another level of the propositional reorganization of a story, namely one in which the propositional contents are reorganized from one particular character's point of view or with a psychological bias towards one particular character and against others. Futhermore, it is this level of propositional reorganization that accounts for the stylistic variation of the propositional contents of sentences.

Therefore, it can be concluded that the discourse notion of point of view has to be taken into consideration in the psycholinguistic studies of discourse. This is because the understanding, summarizing, recalling, and reproducing of stories are all subject to the contextual factor of point of view as well as the schematic bias of story grammar.

In Experiment 2, it was shown that the Secondary Effect Hypothesis was not confirmed in a straightforward manner, but rather in an interactive manner. This suggests that the contextual effect of point of view on the surface structures of the target NP's should be discussed in connection with other linguistic or/and non-linguistic factors such as Syntactic Type, Humanness of Target NP, Humanness of Anti-Target NP, and so on.

On the other hand, the Positive Additive Effect Hypothesis was confirmed in a rather straightforward manner. This means that the contextual effects of the given-new information structure on the surface structures of sentences can be seen to operate in a straightforward fashion. That is, given information tends to precede new information in planning the surface structures of sentences.

The Humanness Interaction Effect Hypothesis was not confirmed, as far as the symmetric predicate and the voice structure were concerned. Therefore, it is not true that a narrator has more difficulty in identifying himself with animal or thing characters than human characters. In this sense, Kuno and Kaburaki's (1977) "Humanness Empathy

Hierarchy" and Ransom's (1977) "Humanness Animacy Constraint" can not be supported. It was instead suggested that the humanness and animacy of NP's should be directly related to the surface subjects of sentences. That is, the higher NP's are in the humanness hierarchy, the more likely they are to be the surface subjects of sentences, regardless of whether or not they are the targets of point of view; in other words, a narrator tends to select human characters as the surface subjects of the symmetric predicates and the passive voice, regardless of the contextual factor of point of view.

With regard to the voice structure, it can be concluded that both of the Secondary Effect Hypothesis and the Positive Additive Effect Hypothesis were clearly confirmed. If the patient NP's are the targets of the contextual factor of point of view, they are significantly more likely to be the surface subjects of the passive voice. In addition, if the anti-target NP's, i.e., agentive NP's, are new information, such contextual effects on the surface positions of the target NP's are enhanced by a significant degree. In this sense, the experimental methodology was successful in forcing the subjects to identify the contextual factor of point of view in the motivated stories.

An interesting question can be raised with regard to the relatively small magnitude of the markednesses and the markedness differences for the voice structure: how should the subjects' basic preference for the active voice over the passive be accounted for? In one sense, this is predictable from the Primary Effect Hypothesis of Experiment 1 which states that the agentive NP's are more likely to be the surface subjects of sentences than any other NP. This prediction was clearly confirmed by the highly significant association between the two given points of view for the rephrase task and the resulting syntactic indices of the two characters. This is also consistent with Dik's (1978) "semantic function hierarchy," according to which agents are more likely to be the surface subjects of sentences than any other semantic case category (also see Fillmore, 1968).

Turner and Rommetveit (1968) reported similar experimental results in connection with the basic preference for active voice over passive voice. From a psycholinguistic point of view, this can be attributed to the most basic cognitive pattern: Agent - Action - Patient, namely Osgood and Bock's (1977) "natural order of human cognizing" or Chafe's (1979) "schematic pattern."

However, the most important point is the empiricial fact that, when patient NP's were the targets of point of view, the mean markedness for the voice structure was increased by 82% (from -0.611 to -0.111); furthermore, when anti-target NP's were new information, the mean markedness difference for the voice structure was additionally increased by 85% (from -0.122 to 0.878). (It is interesting to note that those for the symmetric predicate were increased by 25% and 55%, respectively.) Therefore, it can be concluded that the active voice is more natural with regard to a linguistic level as well as a cognitive level; however, if patient NP's are assigned the contextual status of point of view and the contextual status of given information, they are significantly more likely to be the surface subjects of the passive voice. This is exactly what was expected in Experiments 2 and 3. It is also obvious that these results for the voice structure are consistent with the results of several other psycholinguistic studies (e.g., Osgood & Bock, 1977; Bock & Irwin, 1980; Tannenbaum & Williams, 1968).

It was suggested in Experiment 2 that the surface subject of the passive voice was related to the humanness of NP's, regardless of the contextual factor of point of view. Judging from the markedness for the voice structure, the following humanness hierarchy can be identified: human ≥ thing >> animal, where ">" indicates that the left-hand NP is more likely to be a surface subjects of a sentence than the right-hand one. Experiment 3 also suggests the following hierarchy: human > animal > thing. Taken together, these results suggest that there is a significantly positive relationship between the surface subject of the passive voice and the humanness and animacy hierarchy of NP's, regardless of the contextual factors of both point of view and given-new information.

An interesting question is why humanized thing NP's are more likely to be the surface subjects of the passive voice than humanized animal NP's in Experiment 2; however, this finding did not hold for the symmetric predicate. A possible explanation is that, in the fable or narrative literature, humanized things such as *the Wind*, *the Sun*, and so on are closer to human beings than humanized animals such as *a rabbit*, *birds*, and so on. The difference between the humanized things and the humanized animals may also be accounted for in terms of Osgood and Bock's (1977) "vividness." That is to say, the humanized things are closer to human beings in the sense of an emotional distance than the humanized animals (see section 2.4).

Based on the results of Experiments 2 and 3, three functions of Passivization can be identified: 1) a discourse function to mark the point of view; 2) a discourse function to mark the given-new information structure; and 3) a humanness function for a surface subject to reflect the humanness hierarchy of NP's.

Concerning the symmetric structure, it can be concluded that the Positive Additive Effect Hypothesis was confirmed in Experiment 3, while the Secondary Effect Hypothesis was not. In other words, the surface subjects of symmetric predicates are not governed by the contextual factor of point of view, but by the contextual factor of anaphora of NP's. In this sense, the surface subjects of symmetric predicates are less context-governed than the surface subjects of passive voice.

A question can be raised here: was the point of view well established in the motivated stories? Since the contextual difference between the motivated stories and the unmotivated was clearly reflected in the surface subjects of the passive voice, there is no question that the surface subjects of the symmetric predicates are much less sensitive to discourse context than those of the passive voice.

It was also shown in Experiments 2 and 3 that the choices of the surface subjects of the symmetric predicates had to do with the humanness and animacy of the target and anti-target NP's. Put another way, the higher the target NP's are in the humanness hierarchy, the more likely they are to be the surface subjects of the symmetric predicates, regardless of whether the discourse context is a motivated version or an unmotivated version. Furthermore, the lower the anti-target NP's are in the hierarchy, the more likely the target NP's are to be the surface subjects. The same can be found in Experiment 3. If the target's NP's are humans, they are significantly more likely to be the surface subjects, regardless of whether the anti-target NP's are anaphoric or not. Taken together, these results suggest that the humanness and animacy of NP's should not be viewed as an interactive effect, but rather a main effect directly determining the surface subjects of the symmetric predicate.

A further result is that the following hierarchy can be identified: human >> animal > thing, where ">" indicates that the left-hand element is more likely to be a surface subject of the symmetric predicate than the right-hand.

Moreover, the positive correlation between the surface subjects of the symmetic predicate and the humanness hierarchy of the NP's is much higher than that between the surface subject of the passive voice and the humanness hierarchy of the NP's.

Therefore, two functions of the surface subject of the symmetric predicate can be identified: 1) a discourse function to mark the given-new information structure; 2) a humanness function for the surface subject to reflect the humanness hierarchy of NP's.

With regard to the dative structure, the Secondary Effect Hypothesis was confirmed only in connection with humanized thing target NP's, while the Positive Additional Effect Hypothesis was clearly confirmed. In addition, since the interaction effect between Anaphora of Anti-Target NP and Humanness of Target NP was not shown to be significant, the contextual effects of anaphora on the surface positions of dative NP's can be interpreted in a straightforward fashion. Therefore, dative positions are in part subject to the contextual factor of point of view and totally subject to the given-new distinction. Therefore, it can be concluded that a discourse function of advanced dative NP's is to mark the distribution of the given-new information.

Concerning the Humanness Interaction Effect Hypothesis, the results of Experiment 2 can be viewed as being totally contrary to expectations, judging from the fact that only humanized thing target NP's are subject to the contextual factor of point of view. Futhermore, it is suggested that the higher target NP's are in the humanness hierarchy, the less likely they are to be moved into the postverbal positions (see the "motivated line" in Figure 6). These results are also contrary to the humanness hierarchy as well as to the Humanness Interaction Effects Hypothesis. Therefore, it can be concluded that, as far as the dative structure is concerned, there is a negative relationship between the optional advancement movements of dative NP's and the humanness hierarchy of the dative NP's. This negative relationship can also be seen in Experiment 3 (see the "anaphoric line" in Figure 11). This negative relationship, then, can not be attributed to experimental errors. It is not certain whether or not such a positional tendency for the human dative NP's to be moved into the sentence final positions has to be viewed as a linguistic and/or psychological function. In other words, the sentence final positions may function to reflect the humanness hierarchy of the NP's as well as new information.

This result reflects a crucial difference between two syntactic groups: the symmetric predicate and the voice structure on the one hand and the dative structure on the other. In the case of the former, it was found that the choices of the surface subjects of the symmetric predicates and the passive voice had to do with the humanness hierarchy of NP's. In the case of the latter, the relationship between the optional advancements of dative NP's and the humanness of the dative NP's was found to be negative. One explanation is that this significant difference may be attributed to the linguistic or/and psychological difference between a grammatical subject and a grammatical object. In this connection, Ertel (1977) and Zubin (1979) seem to be correct in arguing that subject selection has to do with the distance between a speaker's own ego and the referents of NP's, while object selection does not. Osgood and Bock's (1977) "vividness of or speaker's motivation for" the referents of NP's might be an alternative to the ego distance principle. That is, humans and human-related objects or things are much closer to a speaker in terms of ego distance; and the closer the referents of NP's are to the speaker, the more likely they are to be the surface subjects of sentences. It is clear that the notion of ego distance can account for both the significantly positive relationship between the surface subjects of symmetric predicates and passive structures and the humanness hierararchy of the target and anti-target NP's and the rather negative relationship between the leftward movements of dative objects and the humanness of the dative objects.

Futhermore, Ertel (1977) asserted the following in connection with the difference in a psychological function between a grammatical subject and a grammatical object:

> It is assumed here that one of the basic mental operations underlying sentence construction is a certain manner of selection that may be called *nominal seizing*. The speaker seizes one and only one of the cognitive units that offer themselves

> as nominal candidate within the realm of what is going to be uttered. The cognitive unit that has been seized is the primary reference point of the sentential construction. Once the reference point is decided upon, the rest of the sentence-the other nominal units included-will be set in relation to this point. Its main role, thus, is to serve as a kind of cognitive device for fixing the sentential construction. As a rule, it will be represented linguistically as a noun phrase preceding the verb and nonsubject noun phrases. (pp. 146-147)

The present study further suggests that the "reference point" for sentence production has to do with both the contextual factors of point of view and given-new information, as well as with the ego of the speaker. As far as the voice structure is concerned, both contextual factors were shown to be directly related to the reference points of sentences. Incidentally, Chafe's (1976) "starting point" function of a surface subject is quite similar to the referent point for sentence production (see section 2.2). Therefore, it can be concluded that the surface subjects of sentences function to reflect the speaker's egocentric bias toward human and human-related NP's as well as to mark the discourse factor of given-new information (and point of view).

Ransom's (1977) attempt to account for the leftward movements in the voice structure and the dative structure in terms of the same notions are highly questionable. The present study instead suggests that there is a clear distinction between the voice structure and the dative structure with regard to the interaction between the leftward movements of the NP's and the humanness of the

NP's, except that there is no significant difference between the two with regard to the given-new strategy.

The voice structure was shown to be much more sensitive to contextual factors than the symmetric predicate and the dative structure. The subject variation of the voice structure is clearly subject to both the contextual factors of point of view and given-new information. In a sense, this is predictable, since it has been reported in numerous psycholinguistic studies that Passivization is clearly context-governed and subject to discourse context.

Before coming to the final conclusion, it is necessary to suggest possible changes in the methodology to complement the present study. First, it may be necessary to use longer paragraphs in the motivated stories. This is because each paragraph in the motivated stories may not have been long enough for the subjects to identify easily the discourse factor of the point of view; longer paragraphs might help the subjects to identify themselves with the target characters or to have a psychological bias towards the target characters and against the others.

Second, it would be necessary to make experimental repetitions with different sets of the nine pairs of target and anti-target characters and their motivated and unmotivated stories in order to make the conclusions more general, reducing experimental errors. This is because markednesses or markedness differences for a few pairs of a target and an anti-target character were found to be exceptionally low or high, as, for example, in the unmotivated version of "A SLAVE AND A FARMER," the unmotivated version of "A RABBIT AND THE WIND" and the unmotivated version of "A MOUSE AND A LION" (see Figure 3a,b). These exceptionally low or high scores might be attributed to the subjects' own personal image or the specific contents of the stories or the alternative sentences.

Third, the unmotivated stories should have been used in order to treat Discourse Type as an independent variable in Experiment 3. This is because some of the results of Experiment 3 were found to be inconclusive in relation to Humanness Interation Effect Hypothesis.

Fourth, it would be useful to use different experimental methods, such as recall and comprehension tasks, before drawing final conclusions about the contextual effects of point of view on the alternative surface structures in question. It is important to make sure that the subject variation of the symmetric predicate and the positional variation of the dative structure are not or are less sensitive to the contextual factor of point of view.

The results of Experiments 2 and 3 can be summarized with three points. First, the Secondary Effect Hypothesis was clearly confirmed with regard to the voice structure and in part with regard to the dative structure. However, the Positive Additive Effect Hypothesis was clearly confirmed for the three syntactic types: the symmetric predicate, the voice structure, and the dative structure. Thus, it can be concluded that the voice structure is no doubt much more sensitive to discourse context than any other syntactic type in question and that the contextual effects of given-new information on the surface structures of sentences are much stronger than the contextual effects of point of view.

Second, the Humanness Interaction Effect Hypothesis was not confirmed. Thus it is not true that a narrator or a speaker has more difficulty in identifying himself with an animal or thing character than a human character. It was also found that the choices of the surface subjects of the symmetric predicates and the passive voice were directly related to the humanness and animacy of the NP's. In other words, the higher NP's are in the humanness hierarchy, the more likely they are to be chosen as the surface subjects of sentences. The positive correlation between the surface subjects of the symmetric predicate and the passive voice and the humanness hierarchy of the NP's was shown to be independent of the contextual factors of point of view and given-new information. There is no significant interaction between the two.

Third, there is an interesting cluster between the symmetric predicate and the voice structure on the one hand and the dative structure on the other, in the sense of the humanness constraints on the leftward movements of the NP's. The subject variation of the first two syntactic types reflects the humanness hierarchy of the NP's, although the suggested hierarchies are not necessarily the same. However, dative positions do not have to do with the humanness of the dative NP's in a significant way. This interesting difference can be attributed to the difference in linguistic or/and psychological function between a grammatical subject and a grammatical object. That is, the surface subjects of sentences function to reflect a speaker's own egocentric bias towards human and human-related objects or things as well as to indicate the discourse perspectives of point of view and given-new information.

Taken together, the results of Experiments 1, 2, and 3 suggest the following three conclusions:

1. In order to be a cooperative participant in discourse, a narrator or a speaker tends to refer to a target character, one from whose point of view the story is related, as an agent or an experiencer and then to realize him as a surface subject of a sentence.
2. A cooperative narrator tends to use passive voice as a marking device to indicate that the patient NP is assigned the contextual status of point of view and/or given information.
3. The alternative surface structures of the symmetric predicate and the dative structure can not necessarily be viewed as marking devices for the contextual factor of point of view but instead signals a given-new information structure, namely the distribution of given

and new information, with the given infromation placed in the leftmost surface position of a sentence.

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APPENDIX A

Story 1

A father and his son were taking their donkey to a neighboring fair to sell it. The son was getting rather tired of driving the donkey. On the other hand, the father felt excited, anticipating a high profit.

They encountered a group of young girls who were laughing and talking together. One of the girls cried "Did you ever see such fools, trudging along the road, when they could be riding?" Upon hearing this, the father hastily told his son to get on the donkey. But the son felt guilty because his father had to walk, whereas he got to ride.

Later, they came up to a group of old men engaged in earnest debate about young people. One of the old men cried out that, nowadays, no one paid any respect to the aged. The son, embarassed and red with shame, quickly scampered off the donkey and insisted that his father ride. The father was rather reluctant to ride. But at last he agreed to get on.

The father and the son proceeded along in this way to the market. The father felt sorry for the donkey; however, the son was quite satisfied that at least he had done the right thing.

Just as they reached the edge of the village, a townsman criticized them for overloading the poor beast and suggested to them that they carry it instead. Upon hearing that, the son suggested to his father that the father get down from the donkey. The son replied that they would tie donkey's legs together and, with a pole across their shoulders, carry the donkey to the market.

When they came to the town, they were such a funny sight that lots of people came out to laugh at them. The poor donkey, frightened by the uproar, began to struggle to free himself. In the middle of the bridge, the donkey slipped off the pole into the water and drowned.

Story 2

There was once a cat and a parrot. They agreed that they would take turn inviting each other to dinner. First, the cat asked the parrot, and then the parrot invited the cat and so on.

However, the cat was very mean. He planned to fool the parrot. He decided not to provide anything at all for dinner except a pint of milk, a little slice of fish, and a biscuit. The parrot came to the cat's house, expecting a fine dinner. He was quite disappointed with the dinner provided, but he was too polite to complain about it.

When it was the parrot's turn to invite the cat, the parrot cooked a fine dinner. He served a roast of beef, a pot of tea, and a basket of fruit. Furthermore, he baked a whole basked of little cakes. When the cat came to the parrot's house, the parrot put four-hundred and ninety-eight cakes in front of his guest. He kept only two cakes for himself.

The cat ate all the roast and fruit and drank all the tea. He also ate all four-hundred and ninty-eight cakes. Anxiously, he looked around for more to eat. At last, he said that he still felt hungry and asked the parrot if he had some more food. The good parrot was quite upset, but he offered the two remaining cakes to his guest. The cat ate up the two cakes and said that he was beginning to build up an appetite.

Upon hearing that, the parrot became angry with the cat. He said to the cat that he did not have anything more to serve, unless the cat was willing to eat him. By saying this, he hoped that his guest would feel ashamed. He then started cleaning off the table.

APPENDIX B

Subject 2

Given: *Father's* Point of View

As I walk to the market with my son and donkey, I am struck by the large amount of discussion being made about me by a group of laughing girls. They wonder why my son is not riding the donkey. Their laughter has embarrased me considerably. Feeling a sense of shame, I asked my son to ride the donkey the rest of the way to the market. He agrees, and we carry on our way. Not long after this, I heard a group of men discussing the lack of respect shown to the elderly. Turning toward my son, I notice that he is red with shame after he hears their comments that it is I who should be riding the donkey. He requests that we trade places and I agree only a short time later, we are again met by a group of people. Only this time they are upset about the burden of our donkey. We decide that they are perhaps right in claiming that the donkey should not have to carry us. I then request of my son that we consider carrying the donkey by tying his legs together, slinging him on a pole, and rest the pole on our shoulders, carrying the donkey in this fashion. After containing the donkey in this manner we continue toward the market. Not long after this, we cross a bridge. To my surprise, we lose our hold on the donkey. I helplessly watch him fall into the river below. There is no hope of retrieving him and I watch the animal drown. I may only sit and ponder the value of having listened to the people's opinions on the way to the market.

Subject 9

Given: Son's Point of View

My father and I were taking our donkey to market to sell. We were walking along leading the donkey when some girls said we were silly to not ride on the donkey. My father told me to get on the donkey but I really didn't want to. I was embarrassed to ride while my father walked. A little further on we passed a group of men and one of them made some remark about me not having respect for my father. It wasn't true, I hadn't wanted to ride in the first place. I got off and insisted my father ride. He didn't want to either but we didn't want to look like fools. After a while we passed some people and they thought we were terrible to make the donkey work so hard. We felt bad and decided to carry our donkey to market. We got a long pole and tied the donkey to it upside down. Then we carried him between us. We got to town and everyone started to laugh at us. The donkey was frightened and struggled. We were crossing the bridge when he kicked free and fell into the river and drowned. That's the last time I worry about public appearances.

Subject 4

Given: *Parrot's* Point of View

The cat and I came to an agreement insofar as I would invite him for tea and he would also invite me for tea. I was to go to the cat's house first; and when I arrived I only found a pint of milk, a slice of fish and a biscuit – not lavish food at all! However when my turn came around I made sure that my guest would not lack anything. I prepared a roast, a pot of tea, a basket of fruit and I baked five hundred small cakes with the intention of placing four hundred and ninety eight in front of him. I thought this would be a lavish feast but on the contrary the cat was very hungry when he had devoured the roast drank all the tea and eaten all the fruit. He also ate all the cakes and despite the fact that I gave him the cakes that I had intended to eat he claimed that his appetite had only been whetted! Naturally I was annoyed and began to clean up saying that if the amount that I had prepared for him was not enough he might as well eat me too!

Subject 3

Given: *Cat's* Point of View

One day a parrot and myself decided to invite each other over for dinner: I would have the parrot over first, then the parrot would invite me over, and we would continue to do this, alternating each other. When I asked the parrot over the first time, I decided to trick him, only served a very meager dinner, with a little fish, and very little else. When the parrot asked me over to dinner, he served a very nice meal. He served a roast of beef, some tea, and a lot of cakes. I ate all the beef, drank all the tea, and ate all the biscuts he served me (498). Then I told him I was still hungry. When he heard this he gave me his two cakes. I ate these and then told him I was just beginning to develop an appetite. When I said this, he said "well I guess you'll have to eat me", and proceeded to clean the table.

APPENDIX C

The first nine stories below are the motivated versions which were used in Experiments 2 and 3. Each story is followed by three sets of four alternatives. It should be noted that only the first two of each set were used as a pair of two alternatives in Experiment 2. The next nine stories are the unmotivated versions. The unmotivated versions were used in Experiment 2 only.

A FARMER AND AN OLD SLAVE

There was once a rich farmer. The farmer owned several slaves and their families. One of the slaves was quite old. The farmer thought that the old slave could not bear hard work on his farm. Thus, the farmer planned to sell the old slave.

The old slave had been satisfied with his family life, living in a small shack. But the old slave got angry with his master when he heard about the plan. The old slave thought that he could not live without his beloved wife and children. The old slave then decided to take his family and run away from the farm. ________________________________.

1. The old slave discussed the farm with the farmer the night before he ran away.
2. The farmer discussed the farm with the old slave the night before he ran away.
3. The old slave discussed the farm with a young slave the night before he ran away.
4. A young slave discussed the farm with the old slave the night before he ran away.

1. The old slave was beaten by the farmer before he ran away.
2. The farmer beat the old slave before he ran away.

3. The old slave was beaten by a young slave before he ran away.
4. A young slave beat the old slave before he ran away.

1. But the farmer was kind enough to give the old slave the small shack.
2. But the farmer was kind enough to give the small shack to the old slave.
3. But the farmer was kind enough to give the old slave an old wagon.
4. But the farmer was kind enough to give an old wagon to the old slave.

A PARROT AND A WOMAN

A parrot was kept as a pet by an old woman. The parrot felt that he was the best friend that the woman had. The parrot's main job was to set up a squawk twice a day, once at daybreak and then again as the sun set.

One night, the old woman was reading one of her favorite books, sitting in a rocking chair. The woman enjoyed reading the book so much that she almost forgot what time it was. Suddenly, the woman was interrupted by the squawk of the parrot: "Go to sleep. Go to sleep." _________.

1. The woman drank a glass of milk with the parrot before going to bed.
2. The parrot drank a glass of milk with the woman before going to bed.
3. The woman drank a glass of milk with a cat before going to bed.
4. A cat drank a glass of milk with the woman before going to bed.

1. The woman was scolded by the parrot.
2. The parrot scolded the woman.

3. The woman was scolded by a cat.
4. A cat scolded the woman.

1. One of the woman's friends presented her with the parrot.
2. One of the woman's friends presented the parrot to her.
3. One of the woman's friends presented her with sleeping pills.
4. One of the woman's friends presented sleeping pills to her.

AN INDIAN CHIEF AND THE PEACE PIPE

There was once a strange pipe in an Indian village. The pipe was called the "Peace Pipe" and was worshipped by the villagers since he saved them by performing miracles. For example, the Peace Pipe healed the sick people and made people feel comfortable and friendly toward everbody. Every Saturday morning, the Peace Pipe talked about the future to the villagers.

One day, the chief of the village met a white merchant who came to the village to sell new rifles. The chief decided to consult the Peace Pipe about the business. So the chief told the merchant that before getting down to business, they were supposed to greet the Peace Pipe. _____.

1. The chief discussed the business with the Peace Pipe.
2. The Peace Pipe discussed the business with the chief.
3. The chief discussed the business with a disciple of the Peace Pipe.
4. A disciple of the Peace Pipe discussed the business with the chief.

1. The chief was criticized by the Peace Pipe.
2. The Peace Pipe criticized the chief.

3. The chief was criticized by a disciple of the Peace Pipe.
4. A disciple criticized the chief.

1. The merchant showed the chief the rifle before going to the Peace Pipe.
2. The merchant showed the rifle to the chief before going to the Peace Pipe.
3. The merchant showed the chief new clothes before going to the Peace Pipe.
4. The merchant showed new clothes to the chief before going to the Peace Pipe.

A FARMER AND BIRDS

There was once a farmer in a village. One day. the farmer went to his rice field to see if his rice had ripened. He felt satisfied that the rice was growing well. While he was there, the farmer saw many birds flying over his rice field.

The birds told the farmer that they knew how to use rice cutters and they were willing to help him. The birds also thought that the rice was ripe enough to be cut and urged the farmer to start cutting the rice as early as possible. ____.

1. The birds conferred with the farmer about the rice.
2. The farmer conferred with the birds about the rice.
3. The birds conferred with farm employees about the rice.
4. Farm employees conferred with the birds about the rice.

1. The birds were asked by the farmer to help him.
2. The farmer asked the birds to help him.
3. The birds were asked by farm employees to help them.

4. Farm employees asked the birds to help them.

1. The farmer handed the birds the rice cutters.
2. The farmer handed the rice cutters to the birds.
3. The farmer handed the birds some bread for breakfast.
4. The farmer handed some bread to the birds for breakfast.

A LION AND A MOUSE

One day, a mouse happened to run across a lion. The mouse got frightened and then immediately tried to run away from the lion. But the mouse realized that the lion was in pain and in need of his help. Discovering a large thorn embedded in the lion, the mouse pulled it out and relieved the pain.

The lion felt very grateful to the mouse. The lion invited the mouse to a wild party. The lion then told the mouse to call for him whenever other animals attacked the mouse. ____.

1. The lion drank a glass of wine with the mouse at the party.
2. The mouse drank a glass of wine with the lion at the party.
3. The lion drank a glass of wine with a dancer at the party.
4. A dancer drank a glass of wine with the lion at the party.

1. The lion was declared the King of the Forest by the mouse at the party.
2. The mouse declared the lion the King of the Forest at the party.
3. The lion was declared the King of the Forest by dancers at the party.

4. Dancers declared the lion the King of the Forest at the party.

1. The mouse brought the lion the throne for the party.
2. The mouse brought the throne to the lion for the party.
3. The mouse brought the lion the bottles for the party.
4. The mouse brought the bottles to the lion for the party.

THE FLOWER AND A TURTLE

The Flower wondered how she could live for more than one season. She envied many animals for having longer lives. One day, the Flower met an old turtle in a garden and asked hin what the secret of his longer life was.

The old turtle told the Flower that he could live longer than any other animal, but that he was not as beautiful as she. The turtle wished that he could be a much more beautiful animal, and could make the same kind of sweet nectar as the Flower. The turtle then suggested to the Flower that she stop hoping for a longer life. ____________.

1. At last, the turtle got acquainted with the Flower.
2. At last, the Flower got acquainted with the turtle.
3. At last, the turtle got acquainted with another Flower.
4. At last, another Flower got acquainted with the turtle.

1. The turtle was invited by the Flower for a fine dinner.
2. The Flower invited the turtle for a fine dinner.
3. The turtle was invited by another Flower for a fine dinner.
4. Another Flower invited the turtle for a fine dinner.

1. The Flower offered the turtle some nectar.

2. The Flower offered some nectar to the turtle.
3. The Flower offered the turtle a gift.
4. The Flower offered a gift to the turtle.

THE TREE AND AN INDIAN BOY

There was once a young Indian boy. The boy was the only son of an Indian chief. The boy was respected by many Indians as the best successor to his father. Like other boys, the boy wanted to have his own canoe. Thus, the boy decided to go into the forest and find a big and strong tree. At last, the boy found the strongest tree that he had ever seen. The boy was excited and was about to cut it with his axe.

Unfortunately, that tree was the King of the Forest of which many Indians were afraid. The Tree was so strong that the boy could not cut him, no matter how strongly he swung the axe. The Tree was angry with the boy and threatened him by saying that if he did not stop cutting, he would be punished. ______________________________________.

1. The Tree conferred with the boy about the canoe.
2. The boy conferred with the Tree about the canoe.
3. The Tree conferred with a queen of the forest about the canoe.
4. A queen of the forest conferred with the Tree about the canoe.

1. The Tree was respected by the boy after all.
2. The boy respected the Tree after all.
3. The Tree was respected by a queen of the forest.
4. A queen of the forest respected the Tree.

1. The boy left the Tree the axe as an apology.
2. The boy left the axe to the Tree as an apology.

3. The boy left the Tree his necklace as an apology.
4. The boy left his necklace to the Tree as an apology.

A RABBIT AND THE WIND

Once upon a time, there was a very proud rabbit. The rabbit always told everybody that he could run faster than anybody else, even the Wind. What is more, the rabbit enjoyed making fun of other animals.

One day, the Wind heard about the rabbit. The Wind got angry about the confidence of the rabbit. The Wind planned to teach the rabbit to behave well in the forest by making fun of him in public. The Wind then sent an invitation card to the rabbit for a race with him. ______________________.

1. The Wind was reconciled with the rabbit after the race.
2. The rabbit was reconciled with the Wind after the race.
3. The Wind was reconciled with the rabbit's supporters after the race.
4. The rabbit's supporters were reconciled with the Wind after the race.

1. The Wind was insulted by the rabbit before the race.
2. The rabbit insulted the Wind before the race.
3. The Wind was insulted by the rabbit's supporters before the race.
4. The rabbit's supporters insulted the Wind before the race.

1. The rabbit sent the Wind the accepted invitation card.
2. The rabbit sent the accepted invitation card to the Wind.
3. The rabbit sent the Wind a message.
4. The rabbit sent a message to the Wind.

THE SUN AND THE WATER

One bright sunny day, a farmer happened to be walking next to the river. The farmer asked the Water and the Sun which of them was more important in the world and which he had to greet first.

The Water said that there was no doubt that the Water was much more important than the Sun. The Water then asked the farmer to think what would happen to his rice field without the Water, and insulted the Sun. The Water suggested to the farmer that he greet him first.

Upon hearing this, the Sun got angry with the Water. The Sun told the farmer that the rice needed the Sun more than the Water. The Sun threatened the farmer by saying that if he did not greet him first, he would have to live in darkness all the rest of his life. ______________________.

1. Eventually, the Sun was reconciled with the Water.
2. Eventually, the Water was reconciled with the Sun.
3. Eventually, the Sun was reconciled with the Water's supporters.
4. Eventually, the Water's supporters were reconciled with the Sun.

1. The Sun was invited by the Water to discuss it further.
2. The Water invited the Sun to discuss it further.
3. The Sun was invited by the Water's supporters to discuss it further.
4. The Water's supporters invited the Sun to discuss it further.

1. The Water bought the Sun some rice as an apology.
2. The Water bought some rice for the Sun as an apology.
3. The Water bought the Sun some flowers as an apology.
4. The Water bought some flowers for the Sun as an apology.

The next nine below are unmotivated stories. These nine were used in Experiment 2 only.

AN OLD SLAVE AND A FARMER

There was once a rich farmer. The farmer owned an old slave and his family. The slave and his beloved wife and children were living in a small shack. The farmer was satisfied that the old slave worked hard on his farm. But the old slave was already fifty-five years old. One day, the farmer and the old slave agreed to talk about the slave's retirement. ______________________________.

1. The old slave discussed the retirement with the farmer.
2. The farmer discussed the retirement with the old slave.

1. The farmer was kind enough to give the old slave the small shack.
2. The farmer was kind enough to give the small shack to the old slave.

1. The farmer hit the old slave.
2. The old slave was hit by the farmer.

A PARROT AND A WOMAN

There once lived an old woman and a parrot. The parrot was the best friend that the woman had. The woman liked spending most of her free time talking to the parrot. Sometimes the woman read her favorite book to the parrot. The parrot always enjoyed listening to the stories. The parrot and the woman also liked listening to the music on the radio every evening. ______________________________.

1. The woman patted the parrot every morning.
2. The parrot was patted by the woman every morning.

1. A next door neighbor presented the woman with the radio.
2. A next door neighbor presented the radio to the woman.

1. The woman drank a glass of milk with the parrot before going to bed.
2. The parrot drank a glass of milk with the woman before going to bed.

AN INDIAN CHIEF AND THE PEACE PIPE

There was a pipe, called the "Peace Pipe," in an Indian village. The Peace Pipe was worshipped by all the villagers, since he saved them by performing miracles. A chief of the village also respected the Peace Pipe as his political adviser. Every time the chief had some trouble in his job, he visited the Peace Pipe. The chief and the Peace Pipe sometimes had dinner together and the Peace Pipe gave his political advice to the chief. ____.

1. The Peace Pipe got acquainted with the chief.
2. The chief got acquainted with the Peace Pipe.

1. Young Indians caused lots of trouble for the chief.
2. Young Indians caused the chief lots of trouble.

1. The chief was sometimes criticized by the Peace Pipe.
2. The Peace Pipe sometimes criticized the chief.

A FARMER AND BIRDS

There was once a farmer in a village. One day, the farmer saw some birds flying over his rice field. The birds noticed the farmer and told him that the rice had already ripened. The birds also said that they were willing to help the farmer to cut the rice. The farmer appreciated the birds' offer. The birds and the farmer agreed that they would cut the rice together. ______________________________.

1. The birds conferred with the farmer about the harvest.
2. The farmer conferred with the birds about the harvest.

1. The birds were offered some rice by the farmer.
2. The farmer offered the birds some rice.

1. The farmer fed some bread to the birds for breakfast.
2. The farmer fed the birds some bread for breakfast.

A MOUSE AND A LION

There once lived a mouse and a lion in a forest. One day, the lion was suffering from a great pain in his leg, and could not run. The mouse dropped by to see the lion. The lion asked the mouse to pull a large thorn out of his leg, which was causing the pain. The lion expected that the mouse would be kind enough to help him. But the mouse mentioned one condition, that is, the lion had to cook a fine dinner and work as the mouse's slave for at least three days. Eventually, the mouse and the lion came to an agreement. ______________________.

1. The lion was scolded by the mouse during the dinner.
2. The mouse scolded the lion during the dinner.

1. The mouse drank a glass of wine with the lion during the dinner.
2. The lion drank a glass of wine with the mouse during the dinner.

1. The lion provided a fine dinner to the mouse.
2. The lion provided the mouse with a fine dinner.

A TURTLE AND THE FLOWER

One day, the Flower and an old turtle met in a garden. The Flower always wished that she could live for more than one season. On the other hand, the turtle wished that he could be more beautiful. The Flower asked the turtle what the secret of his longer life was and said that she envied him for having such a long life. The turtle replied that his longer life was not necessarily easy and said that he envied the Flower for having such beauty and sweet nectar. The Flower and the turtle then took a walk in the garden together. ____.

1. Bees on the Flower brought the turtle some nectar.
2. Bees on the Flower brought some nectar to the turtle.

1. The turtle was invited by the Flower for a dinner.
2. The Flower invited the turtle for a dinner.

1. The turtle discussed life with the Flower.
2. The Flower discussed life with the turtle.

AN INDIAN BOY AND THE TREE

One day, a young Indian boy went into a forest to look for a big, strong tree for his canoe. Afer a while, the boy found a huge tree. But it was the King of the Forest. Since the Tree was woken up by the noise made by the boy, he did not feel good and got angry with the boy. The Tree threatened the boy by saying that if he tried to cut him, he would be punished. However, the boy was so excited with the huge tree that he could not listen to the Tree. The Tree also told the boy that he could not cut him with such a small axe. The boy and the Tree then argued for a while. __.

1. The excited boy hit the Tree.
2. The Tree was hit by the excited boy.

1. The Tree conferred with the boy about the canoe.
2. The boy conferred with the Tree about the canoe.

1. The boy brought the axe to the Tree to cut him.

2. The boy brought the Tree the axe to cut him.

THE WIND AND A RABBIT

A rabbit and the Wind both were confident in running fast. The rabbit always told everbody that he could run faster than anybody else, even the Wind. The Wind got angry with the rabbit for his overconfidence. So they agreed that they would race in front of many animals in the forest. They sent many invitation cards to their many friends. ________.

1. The Wind was reconciled with the rabbit after the race.
2. The rabbit was reconciled with the Wind after the race.

1. The Wind's friends handed the Wind the invitation card before the race.
2. The Wind's friends handed the invitation card to the Wind before the race.

1. The rabbit challenged the Wind.
2. The Wind was challenged by the rabbit.

THE SUN AND THE WATER

One bright sunny day, the Water and the Sun were arguing about which of them was more important in the world. The Water said that plants, trees, and rice could not grow up without his help. The Sun said that nobody could live in darkness. Both of them were very excited in their argument and were getting rather tired. Eventually, the Sun and the Water agreed that they would go to a farmer and would ask him which was more important in the world. ________________.

1. The farmer offered some rice to the Sun.

2. The farmer offered the Sun some rice.

1. The Water disgraced the Sun before the farmer.

2. The Sun was disgraced by the Water before the farmer.

1. The Water then left with the Sun to see the farmer.

2. The Sun then left with the Water to see the farmer.